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Scotland in Early Times.

MR. ANDERSON'S lectures, six in number, on Scotland in early Christian times,* are so full of valuable matter, and of systematic thought, that we should fail to do justice to the whole field over which he ranges within the limits prescribed to the reviewer. We shall, therefore, chiefly confine our remarks to the subject of the two lectures on structural remains, recommending all those to whom the book is accessible to read, and to re-read, the first lecture, on the "Scope and Laws of Archæology." The chief remark of a critical nature which we have to make on the volume is that there may be found a certain degree of repetition due to the earnest care with which the writer discriminates between historic and archæologic times, a defect which is naturally incident to the form of lecture. Such insistance on one or two main points is, however, readily to be pardoned in such an attempt to obtain a really scientific basis for the archæology of Scotland.

The method adopted by Mr. Anderson has inverted the order generally followed in archæological investigations, although the mode of study that he has adopted is familiar to the genealogist and the herald. His idea has been to start from the borderland where the historic and the non-historic meet, and to work his way backwards as far as the light reflected from the present will illumine the past. He has chosen the reign of David I., or, more broadly, the twelfth century, as the general starting-point of his retrospect, as beyond that date charters and records cease, and the ordinary materials of written history are not forthcoming. Here, he says, "the feudal system, with its titular distinctions and territorial aristocracy, and the ecclesiastical system, with its hierarchical distinctions and territorial jurisdictions, which colour all the history of the Middle Ages, also leave us. Architecture itself leaves us. The cities and towns of historic name and locality mostly leave us. Even the very coinage leaves us, and instead of things which give dates and incidents, we have only things which give types and systems." In these last words is couched the main idea which underlies the systematic treatment of archæology by the author of "Scotland in Early Christian Times."

Nor is the interest of the research confined to Scotland. It spreads over the British Isles. It is common to "all the kingdoms that acknowledge Christ." Side by side with that line of descent which traces the structural form of the Christian Church to the Roman Basilica, Mr. Anderson traces an entirely different architectural pedigree. Among the Celtic people he shows us what was the primitive form of church,—something much more closely resembling the *cella* of a Pagan temple, or even the structures of rude megalithic sun-worshippers, than the stately halls of the Roman. And if we read between the lines of his book, and make more use than he himself has done of some of the admirable illustrations which it contains, we shall detect, if not a filiation, at all events an alliance, hitherto suspected by but few, between such buildings as Egilsay Church, in the Orkney Islands, St. Kevin's Church, Glendalough, and the old parish church of Deerness, and that very ancient Aryan form of nature-worship from which Christianity has, in fact, inherited very much,—so much, and so little suspected, that we may count on our fingers the men who as yet are in a position to shed light on the subject.

The characteristics of ecclesiastical architecture in Scotland in the first half of the twelfth century are not unknown to the student. Great conventual and cathedral churches were founded about the time of David I. Among them were Jedburgh, Inchcolm, Kelso, Holyrood, Melrose, Dunblane, Cambuskenneth, Dunfermline, and Dryburgh. But in these it is hard to recognise the work of earliest date. The nave of Dunfermline, as it was rebuilt by King David, is partially preserved; but in all the other churches the earliest work is only to be recognised in fragmentary portions of the existing structures. The greatest amount of Norman work now remaining in any building in Scotland is to be found in the Cathedral of St. Magnus, in Orkney, which was designed by the Norwegian Kol, and commenced by Earl Rognvald in 1137. Its interior aspect, according to the author of "Characteristics of Old Church Architecture in Scotland," "is nowhere equalled by any interior in Scotland." In Orkney, moreover, is to be found the only specimen in Scotland of a circular church, now reduced to a mere fragment, at Orphir. This interesting ruin has been regarded as an example of the development of a church from the early dry-built circular or bee-hive dwellings of the native inhabitants. We think this view can hardly survive the analysis of Mr. Anderson. And he tells us that it is on record that the Norwegian Earl Hakon, who resided at Orphir, made a pilgrimage to Jerusalem in expiation of the murder of St. Magnus, a fact which may well account for the adoption of the circular plan, in imitation of the well-known example at Jerusalem.

The earliest of the existing twelfth-century churches in Scotland have certain marked features of form and construction. They consist of nave and chancel, and the typical features are round arches, with radiating joints over doors and windows, having perpendicular jambs or sides. Omitting, for the nonce, the examples of those structures which are known by the characteristics of construction or decoration to be of, or later than, twelfth-century origin, there are a considerable number of churches in Scotland which possess no architectural features, in the common acceptation of the term,—no moulding, ornament, or distinctive feature to be found in architectural books. These buildings are separable into two classes, the one containing nave and chancel, the other only a simple oblong chamber. There is no great strain put on the argument which regards the latter as presenting the earliest type.

The chancelled churches on the mainland of Scotland are mostly Norman in style. An unique exception is figured from a photograph; the Church of St. Regulus, in the city of St. Andrews. The graceful tower of this unroofed church, which rises to about three and a half times the height of the side walls of the nave, is the most striking feature in the city. Sir Gibert Scott regards the edifice as older than the introduction of Norman architecture into England. It consists of two portions, which are defined as either a nave, with chancel arch, and western tower, or of a chancel with apse arch and central tower, as in the case of Jarrow Church. That the base of the tower formed the chancel of the church is our own view, and in this case we have a very interesting parallel readily accessible from London, the Church of St. Mary, Guildford, of which the tower, still forming part of the chancel, has the external "strips" which are absent in the church of St. Regulus. The archaic splayed windows of the earliest plans figured by Mr. Anderson also occur in the tower of St. Mary's. The capitals of the shafts of the lofty round-headed arch at the end of the nave of St. Regulus resemble those of St. Pantaleone at Cologne, which are of the tenth century.

In the islands of Orkney and Shetland occurs a remarkable group of chancelled churches, small in size, rude in construction, and possessing no architectural features of a character that can determine their date. Of these the towered church on the island of Egilsay, to which we before referred, is figured as unique. It consists of a nave, 29 ft. 9 in. long by 15 ft. 6 in. wide internally, with walls about 3 ft. thick, and of a chancel 15 ft. long by 9 ft. 6 in. wide, with walls 2 ft. 9 in. thick. There are two doorways, 2 ft. 6 in. wide, opposite each other, in the north and south walls, near the west end of the nave, and three windows, round-headed and splayed internally, in nave and chancel. There is no window to the east. At the west end of the nave, and running in to the west wall, as far as is shown by plan, is a round tower, now reduced to 48 ft. in height, but which an old drawing shows to have been more than 60 ft. high, capped by a conical stone roof. The nave and chancel, now unroofed, were formerly roofed with stone. The internal diameter of the tower is 7 ft., and the thickness of the wall at the base is 3·5 ft. The whole building is of irregularly-coursed masonry, but the tower is built of smaller stones than the church. Access is obtained to the tower by a round-headed doorway, opening through the west gable of the nave.

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* Scotland in Early Christian Times. The Rhind Lectures in Archæology, 1879. By Joseph Anderson, Keeper of the National Museum of the Antiquities of Scotland. Edinburgh: David Douglas. 1881.

There are but two other towers of this peculiar character in Scotland: one at Brechin, in Forfarshire, the other at Abernethy, in Perthshire. Each of these is figured in the volume before us. Neither of them is now connected with any remains of a church, and from their construction they seem to have been always isolated buildings. But they stand in churchyards, the Brechin tower adjoining the south-west angle of the cathedral. The doorway of this tower is most interesting. It faces the west, and is round-headed, with jambs that are inclined towards each other. They have a raised band, or architrave, 16 in. wide, ornamented by a row of pellets running all round between two narrow fillets. Over the centre, in a sort of key-stone, is a crucifix, and half-way up on either jamb is a figure in ecclesiastical garb, the one holding an ancient crook, or pastoral staff, and the other a cross-headed or tau-staff. A griffin and a nondescript animal crouch to the right and left of the bottom of the doorway.

In the Brechin tower the stones are cut to the circle on plan, but not squared or built in courses. In the Abernethy tower, which is 72 ft. high and 8 ft. in internal diameter, the stones are in courses of from 16 in. to 12 in., and dressed to the curve. No such towers are found on the mainland of Scotland. But the tower on the Island of Devenish, in Lough Erne, in the county of Fermanagh, which has been called the model round tower of Ireland, is of precisely the same type with the towers of Brechin and of Abernethy, and is figured by Mr. Anderson, who cites the classification of the Irish towers, from Lord Dunraven's notes on Irish architecture, into four groups, going back from a rough ashlar masonry, analogous to that of Norman buildings of the first half of the twelfth century, to a structure of rough boulders, untouched by hammer or axe, with square-headed door, and square or triangular-headed window, constructed of the same material as the rest of the tower. The whole group of these towers is referred by Mr. Anderson to the period of transition between the flat lintelled style of ecclesiastical architecture and the round-arched and decorated Irish Romanesque. But no hint is afforded as to the origin of these towers. Did they at first spring from the soil to their full height in the commencement of the tenth century? So the writer thinks, or, at least, in the latter part of the ninth, nor does he betray any sense of the magnitude of the problem that he thus passes over without remark.

On the Continent exist a few towers which bear more or less resemblance to those of Ireland. "They are high, slender, circular, and have pointed roofs." We could name a broad district of Italy full of garden towers, not generally of very great height, which are used not only for watching the vineyards, but for catching pigeons or quails as they pass by in enormous flights. But Mr. Anderson thinks the Continental towers "want the special character of *safes*, or places of security, which belongs to the Irish round towers." We hold, on the contrary, that the idea of fortress-dwelling is eminently developed in many Italian towers. After the beginning of the twelfth century, Mr. Anderson regards the round tower "as dying out, by a species of degradation of form and function." St. Finan's Church at Clonmacnoise has a round tower attached to it, which is entered by a doorway opening from the interior of the church on a level with the floor. The Church of Dungiven in Londonderry, founded at the commencement of the twelfth century, has a similar tower. But in the case of the Church of St. Kevin, Glendalough, and of St. Michael-le-Pole, in Dublin, "the tower is reduced to a diminutive structure perched on the apex of the gable as a belfry."

While a connexion between Early Christian churches in Scotland and the special form of the Irish round tower is thus lucidly illustrated by archæological research, a second and parallel line of descent is indicated by Mr. Anderson. This regards, first, the relationship of the church, consisting of chancel and nave, to that period of a single oblong chamber, with an eastern window, and (in some cases) an altar platform to the east; and, secondly, the relation of the simplest form of rectangular cell to the beehive dwellings of the early Celtic builders. We must refer to the work itself for full details on this interesting part of the subject. The oldest forms of defensive structure mentioned in ancient Irish writings are,—the Caisel or Cashell, the Rath, the Lis, the Cathair, and the Dun. The cashell was a circular wall or enclosure for the defence of royal residences or monasteries, and was usually constructed of stone. The rath, of which we have numerous examples in Wales, was an earthen fort, or palisaded work, enclosed with one or more ditches, and with earthern ramparts. Many raths contained chambers constructed of stones often in the form of long subterranean galleries, The word "lis," or "lios," is applied to the same kind of structure as the rath. The cathair was the most important of these early fortifications, being built of stone, without cement, mostly of circular or oval form, with thick walls, sometimes chambered. These were most numerous in the west of Ireland, but are for the most part so ruined as to be hardly distinguishable. Smaller enclosures of this kind, containing beehive huts, exist in Kerry. The word "dun" appears to signify fort, or strong place, and is applied to each of the above-mentioned structures.

Mr. Anderson figures a very perfect example of a large beehive cell on Skellig Mhichel, or St. Michael's Rock,—a small but lofty island, lying about twelve miles off the coast of Kerry. It is one of a group of buildings which occupied a kind of oblong platform, measuring about 180 ft. by from 80 ft. to 100 ft., situated on the lower of the two peaks of which the rock consists. It is close to the edge of the cliff, which rises from 700 ft. to 800 ft. above the sea, and was enclosed by a cashell of dry-built masonry, which runs along the edge of the precipice. The ground-plan of the group of structures (which, unfortunately, is not marked with a compass) shows six round or oval buildings, rectangular within, and three buildings, on two different lines of azimuth, which are quadrangular within and without. With regard to two of the quadrangular buildings, Mr. Anderson remarks that their form, their doorways at the west, their small windows at the east, and the remains of altar-platforms, indicate that they were chapels. The sepulchral memorials of the fraternity are within the large inclosure. Here, then, is a case of transition from the pagan cashell to the Early Christian monastery.

Another series of a similar nature occurs on Ardoilean, or High Island, lying six miles off the coast of Connemara. The group of buildings was surrounded by a cashell of a pear-shaped form, the inclosed area being about 108 ft. in diameter. Here, again, we meet with beehive cells, chambers in the wall, tombstones, and a church, which is said to be the rudest of all the early churches of Ireland. Internally, it measures 12 ft. by 10 ft. by 10 ft. in height. The doorway is 2 ft. 6 in. wide, with a horizontal lintel decorated with a cross. The east window is 1 ft. high, and 6 in. wide, with a round head. The altar was still remaining in 1820. The foundation is attributed to St. Fechin, abbot of Fore, who died in A.D. 664.

On Innismurry, an island in the Bay of Sligo; on Oilen-Isenach, or St. Senach's Island, off the coast of Kerry; on two islands off the coast of Skye; and on the Brough of Deerness, an island lying close to the promontory of Deerness, in Orkney, are similar groups, for the full and admirable descriptions of which we refer the reader to the pages of Mr. Anderson's book. Patiently and steadily has he guided the reader back to what we must regard as the primeval form of the Celtic church in Scotland and Ireland, as old as the seventh century. In essential elements of form and construction the primitive form differs from the Roman or European type. The latter, as is well understood, was basilican in arrangement, having its east end constructed as a rounded apse, —a form which, in Rome itself, prevailed from the fourth century down to 1150. These early Celtic churches, on the other hand, afford no example of an apsidal termination. They are invariably oblong, rectangular buildings, with square ends, and high-pitched roofs of stone. Their special features are extreme simplicity of form, extreme rudeness of construction, and total absence of any attempt at ornament or refinement of detail. Mr. Anderson does not appear to have given attention to the very curious question of orientation; and the points of the compass are not marked on many of the plans. On those which are thus figured, the orientation is in no case exact. It varies from some 20° to the south, to some 10° to the north, of east. It would add to the interest of the research to study this question of orientation on the ground, as the physical features of the neighbourhood have to be taken into account in ascertaining on what day the sun becomes visible on rising at a given azimuth. The point to ascertain is whether the direction thus ascertained falls accurately on the day of the saint to whom the church was dedicated, or whether we are to regard the fixing of the centre line of the churches as a matter more or less of chance. This question also bears on the interesting fact of the inclination, in many churches, of the centre line of the chancel or lady-chapel to that of the nave. A lady-chapel, we apprehend, ought to have its axis directed to the point of sunrise on Lady-Day. This, in the present state of the calendar, corresponds to a declination of the sun nearly 2 degrees to the north of east. But in the seventh century, the earliest date yet suggested for the Celtic churches, the vernal equinox fell on the 16th or 17th of March of our present calendar, the Julian year having then lost four or five days from the commencement of that mode of reckoning. Lady-Day then fell on our present 20th or 21st of March, and the orientation on Lady-Day would have been exact. The application of these considerations, controlled by any physical features of the country that might defer apparent sunrise, may perhaps lead to the fixing of the date of ancient churches, of which the dedication, and thus the true ecclesiastical azimuth, is known. At all events, the subject deserves study.

We have only room to indicate the line of argument adopted by Mr. Anderson in support of the view that the rudeness of these early churches may be due to religious motives, or to the imitation of yet earlier holy places, rather than to the barbarism of the builders. "I do not say," he remarks, "that the highest expression of a people's culture may not be found in their architecture. I only say that it is not always or necessarily so, and that a people may be highly cultured in other respects without possessing a single structure that an architect would care to look at." The illustrations of the art of those early days to which the churches above cited are referred, by ancient manuscripts, by bells and bell shrines, and by episcopal crooks or staves, form the subject of the fourth, fifth, and sixth lectures, over which we are loth now to pass, but which, together with the first, would demand at least as much space to do them any degree of justice as we have devoted to the purely architectural portion of the book. Mr. Anderson has done good service to architecture as well as to archæology, and we gladly anticipate a sequel to the lectures.

THE ROYAL ACADEMY EXHIBITION.

THE present exhibition will probably be generally accepted as rather above than below the average of the Academy exhibitions in general interest. At the same time, there is no work which forms an unquestionably leading attraction, or which can be cited as one of the great pictures of the day; and the want of such a central object of interest renders impossible anything like the feeling of enthusiasm which has been raised by some, but not by any of the very recent, exhibitions at the Academy. One point which may be noted is a considerable diminution in the usual proportion of portraits; a diminution which has been, to a certain extent called for by complaints in previous years as to the profusion of not very interesting portraits, but which we fear has not been attained without injustice to individual painters, who have suffered much at the hands of the hanging committee, and whose wholesale rejection we cannot reconcile with the acceptance of some works which are on the walls.

We will mention in the present number some of the more prominent and interesting works, without following the numerical order. The picture which may be said to be in one sense the prominent work of the year, having a special stand allotted to it in the middle of the floor of the Long Room, is that now celebrated portrait of the Earl of Beaconsfield, which "Apelles" was prevented from completing owing to the fatal illness of his illustrious sitter. Obviously incomplete as is the painting (exhibited, we understand, by the special command of her Majesty), it shows that the work would have been, and perhaps may yet be made, a worthy companion, in the artistic sense, to the portraits by the same hand of Mr. Gladstone and Mr. Bright. The strongly-marked character and expression of the lower portion of the face, the large under-lip rather protruding beyond the upper one, may perhaps be even a little exaggerated by the painter, but it is an exaggeration which assists in conveying the essential character of the face; and if Mr. Millais is able from recollection or from sketches to complete the modelling in detail of the upper part of the countenance, we have no doubt the portrait will display in an equal degree that peculiar power which we noticed in Mr. Bright's portrait, which seems to render the painting almost an expression and explanation of the public career of the subject of it. Incomplete as it is, it is a remarkable portrait.

Among the most powerful and successful paintings of the year, if not the most so, is Sir F. Leighton's portrait of himself for the Uffizi Gallery. This is a quarter length, full face, representing the President of the Academy in his robes of office; a very good likeness, and conveying, in its rich, warm, and powerful colouring, a remarkable impression of energy and vitality. In the same room we may note Mr. Long's large picture, "Diana or Christ," as one of the most successful as well as one of the most ambitious of the year. A more interesting subject could hardly be chosen by a painter than the moment of supreme conflict between faith and expediency on the part of a young Christian woman with the powers of Paganism arrayed in all their ceremonial splendour against her. The picture is most effectively grouped. In the centre stands the young convert, her face to the spectator, raising her eyes upward in silent prayer; on her right a young man, apparently her lover, endeavours to dissuade her from sacrificing herself; on her left, and a little behind, a thin, stern man, with earnest countenance, and holding some piece of writing in his hand, interposes to strengthen her in her resolve, and is half drawn back by a soldier who places a hand on his shoulder in an official and authoritative manner, as that of one bound by his office to prevent any interference on the part of unauthorised persons. On the extreme right a black slave watches the proceeding with the interest of one who feels that the religion for which the young woman is testifying is a religion for "barbarian, Scythian, bond or free" alike. On the left is the small altar, the priest watching the result, the boy with the incense-box,—"let her cast one grain of incense, and she is free,"—the silver many-breasted image of Diana of the Ephesians (the scene is supposed to be at Ephesus), and, further to the left, the Ephesian girls of the period, looking on with little more than a cold and rather contemptuous curiosity. We must thank any painter who goes into such a subject as this with the serious purpose and the ability which Mr. Long brings to his work. If the painting falls short of the highest interest which might have been expected from it, we believe the partial failure is to be found in the lack of real intensity of expression in the face of the principal figure. This is the same shortcoming which we have found in previous otherwise fine works by the same painter. We see what he means, but he has not yet succeeded in conveying fully in the face the expression of the deeper and more tragic feelings and struggles of the heart. There is, we hope, much time before Mr. Long, and he may achieve this last and highest triumph of painting yet.

The difference, however, between serious interest in a picture and the want of it may be significantly felt in comparing this work with the one which hangs at the top of the next room, Mr. Calderon's "Flowers of the Earth." The title (rather a pointless one) has double reference to the baskets and wreaths of flowers which are being collected on the steps of a palace, for the decoration of a banquet, and to the young women who are arranging them, in the spirit of Milton's expression about Proserpine gathering flowers, "herself a fairer flower." It is a bright, sunny painting, and the girls are very lovely; but it seems a painting absolutely without a story or a point of any kind, and certainly we cannot find in it any interest at all commensurate with the work bestowed on it, and the large amount of canvas it covers. Another large picture, by Mr. John Collier, is again a contrast,—"The Last Voyage of Henry Hudson." Here there is not even beauty, but there is the deepest and most tragic interest in this picture of the fate of the great navigator, turned loose with his son and the invalids of the crew in an open boat in the Arctic Sea. Only the figure of one of the crew is shown,—a man huddled under a blanket in the foreground; in the stern sits Hudson holding the tiller in a mechanical abstracted manner, his wide-open eyes gazing before him with an expression of blank despair; his son, a lad of twelve or so, reclines against his knees, and looks piteously up in his face. Over the bulwarks is seen the cold, green Arctic Sea, with icebergs and stray masses of ice floating in it. The more we look at the work, the more we feel the real and dreadful pathos of the situation, more impressive because it is an historical fact. Apart from the artistic power of the work, English painting is well employed in thus pathetically commemorating the fate of a great Englishman. The Academy, with a judgment which no one will question, have purchased this picture out of the Chantrey Fund.

It is a relief to turn from this sad subject to Mr. Tadema's bright scene in one of

> ——"the isles of Greece,
> Where burning Sappho lived and sung."

But which is burning Sappho? The picture is entitled "Sappho," and the first conclusion is that the prominent figure playing the harp is the poetess, and we think what a very spare-looking woman she is, till we observe also a small moustache, and we must conclude either that Mr. Tadema has a new theory as to the sex of the poet, or that Sappho is one of the listeners on the circle of marble seats facing the harpist. But, if so, she is "whichever you please," for there is nothing to mark her out from the rest. The real interest of the picture is in its thoroughly antique aspect, and the beautifully clear atmospheric effect of the scene, with the white marble theatre, and the "glad waters of the dark blue sea" far below; for the scene is on the height of a rocky Mediterranean island. On the opposite wall of the same room we find Sir F. Leighton's "Idyll," also a classic scene, in a sense, but the classicism is rather ideal than peculiar to any time or country. Two women in white and saffron robes recline on the right; a youth with his back to the spectator, on the left, discourses pipe-music to them. The interest of the work lies mainly in the beautiful drawing and colouring of the male figure, and the delicately-managed gradation of tone between the parts in light and those in half-shadow and reflected light. The female figures represent a type of sensuous Greek beauty with which the painter has familiarised us, but we cannot say we find very much interest in them.

Let us turn to some subjects of modern life. Two pictures of this class seem exceptionally successful, in grave and gay moods respectively. The former is Mr. Waller's "Success," the best work of his we have seen here yet. The scene is the outside of a park in the early light of morning, and "Success" has been attained by a young man who has killed his adversary in a duel, and who, still in his shirt-sleeves and rapier in hand, and apparently perfectly dazed by his contending feelings, is being persuaded by his friends to enter the coach-and-four which has been judiciously provided to carry off the successful combatant. In the distance the body of the other duellist is seen stretched on the grass, with figures bending over him. There is a fine and serious satire in the work, which is well and carefully executed in every respect, and the effect of the tender hazy morning light intensifies the contrasts of the scene. The other work we referred to is Mr. Hodgson's "Bound for the Black Sea, 1854," in the large gallery, a dock-yard scene, where we are shown the humours of Jack on taking leave of his country and his countrywomen. Never has Mr. Hodgson done anything better than some of the characteristic figures of broad-faced jolly sailors, turning everything into a joke; they are the very men, and the man-of-war's-man character is summed up in them. In the centre of the middle distance a large fat marine is getting photographed in a tender sentimental grouping with his beloved, who leans her bonnet against his martial chest, and the three sailors who look on and make fun of the group are inimitable. There is a fine clear bit of sunny water seen between the ships and the houses, and every detail is well carried out; but the figures of the sailors are specimens of as true humour as painting could show.

Battle pictures are rather in the ascendant this year; among others, Mr. Eyre Crowe appears as the painter of one, and a very good one, "The Blowing up of the Cashmere Gate at Delhi." The catalogue says "The Explosion of the Gate," which is a wrong use of words; "explode" is not a transitive verb: the powder-bags exploded, the gate did not. The scene is in the ditch of the fortress, with the drawbridge cutting across the view; on it is the figure of the man who was at last successful in firing the fuse, two other men having been killed in making the attempt; in the ditch are their prostrate bodies, and also a young officer who had placed the powder-bags, and jumped into the ditch to await the explosion, and the bugler who had accompanied him to give the signal for the advance at the proper moment. The painting is very real in its conception of the scene,—there is no carpet soldiering about it; it is real hot work, as the attitude and manner of the soldier on the bridge effectively show. The figure of the young officer below, Lieut. Home, is very fine and full of energy and heroic character. Another painting of the same class, and of still more importance, is Mrs. Butler's "Rorke's Drift," in the Lecture-room. This is a wonderful painting of the kind for a woman to have made; it is thoroughly grim work. Realism has been more in the artist's mind than artistic effect, and so it should be in such a picture; we have got now so much in advance in the idea of painting battle scenes that few would now tolerate the old grouped scenes, with a horse effectively put in the right place, and a general officer pointing with a telescope in a theatrical attitude. The figures in Mrs. Butler's picture are so placed as to be well distributed on the canvas and not to interfere with each other, but there is no posing of any kind. The scene is taken inside the barricade, and the two officers are in the centre, as they naturally would be; in the foreground a soldier points his gun across the top of the sacks, and a Zulu, grinning with rage, and with every muscle in his face in tension, has grasped the other end of the barrel to force it aside; the same kind of struggle is going on along the line towards the background in various phases. One little detail gives great reality to the scene; some of the men hold pieces of paper round the barrels of their muskets where the hand grasps them, showing how hot, in every sense, the firing has been. The picture is one to make one hold one's breath, so intense is the excitement in every figure and so unequal seems the struggle; and as a realising of the facts of desperate fighting the picture is more powerful and successful than that by M. Philippoteaux which was exhibited in Bond-street. With these battle-pieces may be mentioned a scene presaging a battle, the envoys out of the town of Gloucester brought before Charles I., who was besieging it. Mr. Seymour Lucas, who has chosen this subject, quotes a significant sentence from Clarendon to the effect that the odd aspect of the Puritan envoys raised smiles outwardly and caused inward gravity in the Royalist staff, "who concluded that such ambassadors could bring no less than a defiance." This is completely carried out in the picture. The two Puritan soldiers are a couple of as stern and wiry-looking warriors, with as little pliability in them, as one could wish to see, and the countenances of the cavaliers making superficial jokes between themselves, but evidently in a half-hearted manner, are equally true to the situation. The face of Charles I. is rather wanting in the character which essentially belongs to it in the best portraits of him; but in the main this is one of Mr. Lucas's best and most interesting works. It is balanced by a picture of about the same size by Mr. J. D. Linton, a work which explains, in a satisfactory way in every sense, the restricted nature of his contributions to the Institute of Water-Colours. The subject is "The Benediction" of a young knight of Mediæval chivalry, who kneels in full armour and with his newly-indued gold spurs on his heels, on the pavement of a cathedral (a good many of his elder armed brethren kneeling with him), and receives the blessing from some richly-robed ecclesiastics whose faces show a serious sense of the importance of the occasion. On one side kneel, looking at the young knight, his father, mother, and younger brother,—a group whose position and attitude in reference to the principal figure give a fine touch of human tenderness to the scene. There is much scope for fine manipulative painting in the armour, the ecclesiastical robes, the architecture, and of these opportunities every one would expect to find that Mr. Linton had fully availed himself; but apart from mere execution, there is a noble and truly chivalrous feeling in the picture.

Remarks upon a good many other pictures we must defer to next week. But while singling out effective works, we must not defer notice of a really fine and impressive work among the sculpture, the "Cleopatra" of Mr. G. A. Lawson. This is in plaster only, and shows the figure of a grand woman, heroic size, at the moment when she has fallen back dead in the chair after the bite of the asp. Head and body repose calmly, the face upturned and the lips parted, but the left foot is drawn back sharply, as if in a momentary convulsion, giving an impression quite distinct from that of sleep. The drapery is very finely treated. We have noticed at different times very able works of Mr. Lawson in the sculpture gallery,—a good many will remember his powerful figure of the man struggling with a panther; but there is in the "Cleopatra" not only power of modelling, but a very fine poetic feeling and tragic force; it is a work which exhibits that high ideal in sculpture which is for the most part so sadly rare in the Academy sculpture exhibits, and we call attention to it (since the public are so negligent of sculpture) as certainly one of the finest products of this year's exhibition.

FROM THE BANKS OF THE SEINE.

LENT has come and gone, and Easter has already drawn to a close,—an exceptional Easter, the early days of which were favoured with April's warmest sun. Parks, streets, and museums have been inconveniently crowded by strangers and provincials, the theatres crammed, and the cab and omnibus traffic sorely tried, but the good-humour invariably attendant at such periods on the exchange of the precious metals on the part of those expending and those receiving seems but in few instances to have been disturbed. The classic ginger-bread fair in the old Faubourg St. Antoine, which the Prince of Wales, it will be remembered, on one of his recent visits to Paris, graced with his presence, is, at the present moment, in full blast, attended by a large number of visitors than the oldest Parisian can recall. Prosperity, in fact, is evident everywhere, and in the midst of the fairy-like scaffolding poles, the white stone walls rising in every direction in the capital, where the palmy days of the Empire, in this respect, seem to have returned. This prosperity of our neighbours, for which the new teachings of the political economists show us we need feel no jealousy, as its effects influence largely our own prosperity, is not merely apparent. Government statistics support the outward evidence; the recent returns for the first three months of the year show, both in the foreign commerce of France and also in its home revenues, unexpected excess over the official valuation of as much as two millions sterling, a result which eloquently proves the increase of wealth in this industrious and pleasure-seeking country, at a moment, too, when France is suffering from the momentary depression of trade which affects the commerce of the world. Although outside the circle of professional interests, we may mention that the meeting of the monetary congress has aroused no small interest, though we regret to see that England has been receiving some rather hard raps for its conduct. Even the *Petit Journal*, whose "leaders" have so constantly laid warmly before its numerous readers the merits of many of our English institutions, is severe on the opposition of England to aid in the action of the Congress, "that England which, upon so many points, takes the lead in the social movement of the day, but which upon certain others is, and wishes to remain, an obstacle, at the same time that she is powerless to influence the other nations."

In Paris, it must be admitted, the circle of artistic interests is very much larger than is the case in England, a fact which, perhaps, greatly preserves the French from the possibility of such artistic epidemics as from time to time afflict and amuse, with us, those sincerely interested in the cause of art. Here in Paris the theatre claims in this respect a large share of sympathy which is never grudgingly accorded. We had occasion, we believe, a year or so since, to refer to the orphanage which had been organised by a number of charitably-disposed lady dramatic artists, to aid the daughters of unfortunate actors and actresses. The institution has, it appears, in the three years of its existence, prospered admirably, but, as is so often the case, is now in want of funds to continue its work and support the increasing number of orphans who appeal for aid. On Easter Sunday, under the patronage of the committee,—a committee such as is rarely to be met with, composed of some of the most charming and eminent of the actresses of Paris,—held a children's ball at the Hôtel Continental, with every attraction for the little ones that such a governing body could imagine, the receipts from which and from the bazaar for the grown-up babies were intended to swell the funds of the orphanage.

The successful existence on the banks of the Thames of an establishment so eminently foreign in its element as the Alhambra in Leicester-square, has at length roused the emulation of the French theatrical world, and Paris is soon to possess an establishment somewhat on the principle of our Alhambra, and resembling in name and appearance the Eden Theatre of Brussels. The theatre, which has been projected for some time, is shortly to be called into existence, and its success is ensured not alone by its three directors, but by the fact that as soon as the subscription was opened, the shares were immediately all taken up. The Parisians, in fact, have hailed the idea of a theatre on a new plan,—a theatre where, instead of being obliged to sit still a whole evening, they may freely circulate. Such establishments, it is true, exist in Paris, but, little as it may be believed, the Parisians have had to admit that the attractions supplied fall far short of what the Londoners enjoy. Architecturally, we learn that the new theatre will resemble no other in Paris. There is to be a winter garden inside the house, the fairy-like beauty of which, bathed in dazzling light, is to be magnified and reflected in huge mirrors, while the rest will be of course in due harmony; Paris, in fact, will have a thoroughly Parisian house, decorated in thoroughly Parisian taste, where will be represented,—but perhaps it will be better not to predict. This is a new Parisian feature we have not mentioned with any view to arousing emulation on our side of the Channel, but which, in the architectural movement, deserves notice; the architecture of each epoch, it is acknowledged, supplies the requirements of that epoch, and the Parisians,—or rather that peculiar race so almost completely made up of strangers and provincials who call themselves Parisians,—will by next season have their requirements satisfied in their new Eden Theatre.

Though the connexion of the late Lord Beaconsfield with artistic interests may not at first sight be apparent, not many days since we were reminded, by an inquiry from a foreign source, of his close connexion on his mother's side with George Basevi, the eminent architect to whom London owes the design of Belgrave-square, Cambridge the Fitzwilliam Museum, and who met with an accidental death when in the exercise of his professional duties in Ely Cathedral.

THE GROSVENOR GALLERY.

THE special artistic tendencies which have hitherto distinguished the Grosvenor Gallery exhibitions of modern works are less marked in this than in former exhibitions: there is a larger proportion than usual of works, landscapes and portraits especially, which are free from the stamp of a special school or party in art This, on the whole, and without denying the interest of the works of the school referred to, we cannot but consider as an advantage. Art does not in the long run gain by the cultivation of *caviar* for the taste of a restricted section of the public. That which commends itself to the judgment of cultivated people generally will be found in the end to be the most healthy form of art, and the most permanent in its interest and its influence.

The distinction between this exhibition and former ones would be sufficiently marked by the mere fact that Mr. Burne Jones is not represented in it. This is undoubtedly a disadvantage to the exhibition in the eyes of those who can appreciate genius, ideal aims, and beautiful execution in painting, without allowing themselves to be blinded by the real excellencies of such an artist as Mr. Burne Jones to his equally real defects of mannerism and restricted range of style and sympathy. But it is perhaps just as well that a hiatus should take place in the continuous annual "cult" of his rather sentimental art in the Grosvenor Gallery, and that enthusiasts should have a little time to look about them, to consider whether there was really all in these representations of sweet languishing unreal women which they were wont to fancy in them. Mr. Albert Moore re-appears with his usual class of subjects, but we hardly think he is at his best. His largest work, "Blossoms," is less beautiful in the kind of sensuous beauty which this artist portrays than usual, and the attitude of the figure is somewhat contorted and awkward; and unless pictures of this class are thoroughly graceful they are nothing, for there is no intellectual meaning in them. The smaller work in the West Gallery, "Forget-me-nots," is more perfectly successful in its aim.

The portraits this year are numerous, and include many of exceptional interest and beauty, which form the strongest portion of the collection. The list is headed, taking the order of numbering, by Sir Coutts Lindsay's half-length portrait of Mr. William Lindsay, a very admirable piece of simple and unaffected portrait-painting. We use the latter epithet advisedly, because it cannot well be applied to some even of the really most able portraits in the gallery. We do not like to see a portrait appearing too obviously as if the sitter had been dressed by the artist with a view to effect, and this is the impression that many portraits in the Grosvenor Gallery have given us, though this characteristic, again, is less prominent this year than on former occasions. The object of portraiture, after all, is to paint the person and not the costume, and the painting which gives the impression of the character and manner of the sitter in every-day life is more to the purpose, and in more true taste, than that which conveys the idea that the artist has been making him or her the excuse for a study in "colour-harmonies." This reflection may be illustrated by a comparison of Mrs. Collier's portrait of a girl (No. 35) with Mr. Millais's exquisite girl-portrait (No. 39). The former is very effective in colour, but it is too obviously painted with that end; we feel that the interest of the face is secondary to that of the dress and accessories. In the portrait by Mr. Millais the personal interest is the first and central one; the sweet eyes and expression of this "dear child of nature" (a phrase of Wordsworth's which the picture at once suggested to us), appeal directly to our human sympathies, and it is only after doing justice to its innocent beauty that we feel free to notice the painting of the dress and the background, and to discover how harmonious the whole is without appearing in the least as if contrived to be so. Going back to the numerical order, we may notice next (we are at present keeping to the portraits) Mr. W. B. Richmond's half-length of Miss Holland, a young lady of marked individuality of countenance, simply attired in a green dress, and holding a primrose in her hand. The effect of the flower upon the colour-effect of the whole is, of course, very important, but it comes in quite naturally and in an apparently unstudied manner. The portrait of Mr. Lyulph Stanley, by the same artist, which forms a pendant to this, is very highly finished, but, to our thinking, many degrees below the other in artistic power. We are next brought up by Mr. Holman Hunt's portrait of Professor Owen, which we are very glad to see, if only for the reason that it may serve to efface the memory of a very unfortunate portrait of last year, by which the painter certainly did not add to his laurels. The Professor is painted in his professorial gown, and seated in a large elaborately-carved arm-chair, the details of which, as well as all the other accessories, are painted with the artist's usual force and precision. The flesh tints of the face seem too cold and grey, but it is very forcibly painted, and the whole work is a powerful specimen of the most realistic school of portraiture. Mr. Herkomer's "Professor Ruskin" forms a significant contrast to this. It has the appearance of being slightly painted, but the character and expression of the face are admirably given, and nothing else is allowed to interfere with it. Mr. Watts's "Lord Stratford de Redcliffe" (the late) is a portrait of the same class, the painting of the expression of a countenance only. We might say that Mr. Hunt's is an official painting, such as might suitably hang as a memorial in some public room in which the professorial office had been exercised; the portraits by Mr. Herkomer and Mr. Watts represent the men rather than their office. Mr. Richmond's "Marchioness of Lorne" is a very highly finished *portrait de luxe*,—remarkably successful as an example of brilliancy and high finish, without hardness or artificial character. The dress is very rich and much elaborated, but that is not out of keeping in the portrait of a princess. Yet we are more interested in a slighter half-length by the same artist, called merely "a sketch,"—a young lady in a hat, looking round towards the spectator as she passes across the plane of the picture; it is full of life and vivacity. Mr. Watts's "Miss Venetia Bentinck" is interesting as an effort to treat effectively a subject of a remarkably blonde complexion, almost approaching the character of an *albino*, who is clad in a red dress which supplies the warmth of colour wanting in the complexion. This may be compared with Mr. Richmond's exactly opposite treatment of the portrait of Miss Holland, before referred to, in a cool green dress. In both the result appears to be obtained in a perfectly natural and unforced manner, and they stand as very good examples of special treatment suggested by special personal characteristics of the sitter. Mr. Millais's portrait of "Mrs. Kate Perugini" (68), with her back to the spectator, and as if walking away, showing the face in profile looking towards the left shoulder, is very characteristic in every way. The Reynolds of our day resembles his great prototype in this, among other points, in the exceedingly varied manner in which he has presented his sitters; he has given us portraits in every variety of attitude and movement, and always in a manner suitable to the idiosyncrasy of the subject, and which aids the expression of the personal character of each. Mr. Poynter's small full-length sketch of "Lady Wenlock" is charming; there is grace, ease, and refinement in the whole *pose*, such as it would be difficult to surpass. Sir F. Leighton's "Mrs. Algernon Sartoris" is a very charming half-length of a bright little "Woman in White," relieved by a green cushion on the back of the chair; there is a delicate, fairy-like grace in this which is very unusual. In a very different manner Mr. Richmond exhibits, in the East Gallery, a portrait with no name, a half-length, very rich in colouring, of a lady seated facing the spectator, the countenance a little foreshortened; great part of the charm is due to the sitter, who presents to us a most beautiful and interesting countenance; but the artist has well done his part in so succes fully realising such a face on canvas. Mr. Whistler has a portrait (113) of a young girl, in the same room, not quite so hazy in execution as some of his works which have provoked the wrath of irrepressible critics, both serious and comic; but we cannot undertake to admire it: there is character in it, but it is unpleasant character, and we would hope that the artist has done injustice to the features and expression. Of anything like real flesh tones the painting is quite innocent. Mr. Holl's portrait of "Viscount Holmesdale," gun in hand, in the same room, is a capital example of straightforward, unaffected, and what may be called, in every sense, manly portraiture. In some quarters there seems to be considerable admiration for a large portrait, at the top of the room, of a large young lady, by Mr. Gregory. The painting reminds us of some of M. Taine's not very delicate criticisms on the style of English beauty, which would be justified if this were a fair type of the English girl. The artist has had for a sitter a young woman in rude health and of apparently much more marked physical than intellectual development, and he has intensified these characteristics with considerable power and uncompromising fidelity; but to our thinking the work is too prosaically truthful to be pleasant.

Of the works of more ideal aim in the gallery, we have already mentioned the large painting of Sir Coutts Lindsay, of the Embarkation of the Souls in Charon's boat. As a treatment of figures in various attitudes and with a great deal of movement, there is much to admire in it, but it seems to us too realistic in detail for the subject. Charon is a striking and powerful figure, but there is much to praise in the competition. An effort to combine painting and poetry is shown in Mr. Richmond's work at the other end of the room, "The Wise and Foolish Virgins." Here, while the action of the figures is perfectly natural, the scene is nevertheless sufficiently removed from realism to appear as what it is, the translation of a parable into painting. The artist has been fairly successful in contrasting the action and demeanour of the two classes of figures in the scene, without dividing them rigidly into two separate groups, which would have interfered with the effectiveness of the whole as a composition. Possibly even further departure from realism in the architecture and accessories of the scene would have been desirable; and the painting does not make us forget that allegory is difficult and dangerous ground for the painter, a consideration which a good many works exhibited year by year in the Grosvenor Gallery have tended to impress upon us strongly. Miss Pickering's scene from the second part of Goethe's *Faust* is an example. There is nothing in the four lank, heavily-draped female figures who represent "Hunger, Debt, Care, and Necessity," to identify them respectively with such ideals; they might mean anything else if other names were put to them; and on the other hand, the attempt to individualise them more strongly would probably have resulted in something very ugly and *bizarre*, as painting. Still, the subject had better have been avoided unless the artist felt prepared to treat it so that its purport would really be intelligible to the eye. Mr. Watts's "Arcadia" is a fine and richly-painted life-size figure, which suggests itself as a companion to his "Daphne," though hardly equal to that beautiful and, as we think, central effort of his genius. "Pygmalion's Bride," by the same artist, is a bust of a physically grand-looking woman, sufficiently statuesque and expressionless to answer to the title; but we tire of these beautiful lifeless figures, "there is no speculation in those eyes," which look straight out of the picture; much rather would we see a portrait of a less perfectly formed face in which there was life and character.

Of the landscapes, which are not numerous, the finest is Mr. Hemy's large and powerful painting of "Oporto," from the river, with its mass of houses and large buildings rising, solid and real as they can be, in the strong sunlight. Mr. Herkomer's "The Gloom of Idwal" is a fine mountain scene, perhaps rather wanting proportionate force in the foreground; the gleam of light on one of the more distant rocks, which just catches the sunlight over the shoulder of the neighbouring hill, is very finely given. Mr. Fisher's "Spring," and Mr. Lawson's "Wharfedale," are both fine in a very different way; but both these painters repeat the same effect too much; we seem to know these scenes off by heart. Mr. Keeley Halswelle makes a fine and powerfully built up landscape out of "Whittenham Clumps," with the heavy mass of clouds hanging like ramparts over it. Mr. Browning's "Still Life" is notable for an admirable and almost absolutely real brass pan, a utensil which has been dear to many painters possessed of realistic power. Mr. Muckley's decorative panel, "Water-Lilies and Herons," is a beautiful and effective work of its class.

We should not omit to mention Sir Noel Paton's small work, entitled "The Adversary," in other words, we presume, the Devil, an attempt to convey an expression illustrating the verse "where the worm dieth not, and the fire is not quenched"; it is one of the most successful specimens we have seen of a class of subject to which this artist has leaned a good deal, and in which he has been more successful than in his larger works. We may add, in conclusion, that the Grosvenor Gallery fully maintains its place and justifies its existence as the field for the exhibition of art differing more or less in its aims from the usual run of the Royal Academy collection; and that even where we doubt as to the success or, artistically speaking, the desirability of those aims, it is well to have an exhibition which contains so much to provoke thought and consideration as to the ends and objects, and sometimes as to the limitations, of the art of painting.

THE PARIS *SALON* OF 1881.

It requires more patience than most of us are gifted with, and a wider charity than we fear our modern life promotes, to allow of our speaking with apparent moderation in our condemnation of this year's exhibition in the Champs Elysées.

Not even the Parisians themselves, having, as we know them to have, so much regard for their artistic credit, can hope to smooth over by friendly criticism the terribly-vulgar display that on Sunday last was thrown open to excite the wonder and the ridicule of so many visitors, authorised and invited, who under the impression that they were about to enjoy the old-established privilege of "varnishing day," found themselves in the society of smart people, the numerous friends of the very large Council of the new organisation of the *Salon*.

This year, as we have long since stated, the entire management of the exhibition has been handed over by the Government to the artists themselves, who, in restricting the number of pictures they have exhibited, have left us all in a mysterious doubt as to what kind of pictures can have been refused.

That the severity of our view is the result of no foreign prejudice is, we think, fully shown by the opinion of the well-known art critic, Albert Wolff, who has expressed in no mitigated terms his disappointment at this year's *Salon*. "In vain the Council," he remarks, "will claim that this year they have received 1,500 pictures less than last year. Three thousand pictures utterly wanting in interest do not degrade a public exhibition any more than do 1,500. At every step one is tempted to ask, How works so beneath nullity itself can have found a place here? It is piteous! The *Salon* is composed of about fifty first-rate, a hundred or so second-rate, and two hundred merely interesting works; admit five hundred others for the sake of encouragement, and we reach a total of a thousand. The rest do not exist, and belong to no species of art. It is a pity; for, with a thousand pictures, a first-rate exhibition might have been got up. There is no school in the world," modestly remarks our French critic, "which counts so large a number of men of talent in all the branches of art as ours. Why couple them every year with what is lowest, most ridiculous, and useless in painting? Where is the man with the iron hand who will definitely raise the annual exhibition 'for the dignity of the arts,' as M. Guillaume has promised in the first meeting of the Artists' Committee?"

There appears in Paris no disposition such as exists in London to regard artists, as a class, deficient in a knowledge of business, and this year in Paris that useful knowledge which French artists certainly possess in a very high degree has been manifested with the prospect of results the end of which it is only those well acquainted with the mysteries of artistic business who can foresee.

There certainly exists in Paris just now a very large class of fortunate individuals who have but recently been placed by circumstances in a position to embark in the engrossing and expensive task of furnishing and adorning their newly-acquired "flats" or mansions,—happy innocent people who, having secured a splendid place whereon to rest their wearied limbs, have now to look about them to make their homes more magnificent than the palaces of the disgusted nobles, who characteristically console themselves with their own old comfortable surroundings at a distance, and the still more substantial ease of sound investments.

Year by year we see at the *Salon* a fresh series of well-designed, well-drawn, and skilfully-painted pictures, the general effect of which, at first sight, appears very little different from the pictures of former exhibitions, and reminding us again and again of well-known and familiar motives, and in many instances venerated examples, just as we as readily or more readily detect the vulgar, and quite as often the simply miserable imitation of the last popular painter's work.

Which of us can say who is to blame for the extraordinary position of degradation that French art,—as it is now represented at the *Salon*,—has arrived at? However unwilling seriously-minded people who regard art as a question not in their way may be to bestow much thought on the subject, it has surely become a sufficiently important question for serious reflection, how, in the midst of so much prosperity and with encouragements and rewards for the artists, greater than at any other period of history, the French artists of to-day are without doubt becoming, if they have not already become, merely impatient indecorous seekers for gain, and utterly deficient as industrious workmen, in a proper estimate of the amount of labour that in justice they should give as an equivalent for their hire.

There are people in Paris,—and people in Paris have a way of thinking that they know everything,—who tell you that the unquestioned vulgarity and poverty of skill displayed in this year's *Salon* are owing to what may be hoped to be the culmination of the "protective" system, that is, the influence of the "masters," whose interest it is to watch over and protect their pupils; and certainly this is not unlikely to be the case, and the cause of the imitative art that we see exhibited. It is perhaps too much to say, as some do, that the masters are very little better than their pupils, many of whom in time,—in a very short time, too, in France,—are to form *ateliers* of their own, out of which are to spring innumerable artists to furnish future *Salons* with similar delectable work such as this year we are regaled with.

In these early hours of the exhibition it is difficult, from what we have seen or heard, to imagine the possibility of a second year's trial being permitted under such conditions as have brought together a collection of pictures so unworthy our esteem or consideration as the 2,448 canvasses that are now being exhibited at the Paris *Salon*.

There must be not a few distinguished French artists who are now exhibitors at the *Salon*, who, we should think, must be almost disgusted at seeing their work in society so uncongenial, especially as this year is so frequently to be observed, in company with cruel imitations of the popular style, the followers and imitators of the last favourite picture never failing, by their exaggeration, to make known to the public the weakest parts of the master's hardly-acquired methods and management of his art. We remember poor Mason saying, on finding so many painters imitating him, that it was too bad of his brethren to copy his ideas when he was conscious of possessing so few, and had so much difficulty in making use of the few he thought he possessed; but here in Paris one popular painter, one successful and "palpable hit" at the *Salon*, or with the photographist, makes fifty followers with whose work we become almost as familiar as with the master's, until the original, seldom too strong, and rarely healthy, sinks in our estimation, overwhelmed by the weight of gross matter it has created.

It is quite possible that the very largeness of the rewards, and the fascination offered by artistic success in Paris, may have become the great cause of so much degeneracy among the young painters, who appear altogether to have lost their simplicity, and certainly to have given up their love of work for work's sake.

And where is all this careless art to end, and especially, we ask ourselves, where are all these thoughtless pictures to go? Can it be possible that the immediate destination of so many bad paintings is likely to be the United States of America? If so, our prosperous friends on the other side of the Atlantic must look out within the remaining short years of this century for another Trollope to point to, and to exaggerate some of their peculiar social habits, such as that distinguished lady, the mother of still more distinguished writers, pointed out, now nearly fifty years since, to the amazement of many, and the amusement of a few of our American cousins.

Paris.

COMPETITIONS.

Eastern Counties Asylum for Idiots.—We understand that nine sets of designs for the enlargement of the Asylum have been sent in, under the following mottoes:—"Quid," "Potestas," "Sympathy," "Experience," "Ways and Means," "Spero," "S. F.," "Orandum est ut sit mens sana in corpore sano," "Camulodunum."

Carlisle Grammar School.—A meeting of the Governors of the Carlisle Grammar School was held in Carlisle, on Saturday afternoon. The chief business was the selection of a set of plans for the new school buildings. After examination, the Governors unanimously selected for the first premium of 100*l.* the plans of Messrs. Hetherington & Oliver, under the motto "Health"; and for the second premium of 50*l.* those of Mr. R. Robson, of London. Messrs. Hetherington & Oliver have received directions to prepare working drawings and specifications, and a Building Committee, consisting of the Mayor, Mr. MacInnes, Canon Prescott, and Mr. Milburn, has been appointed to confer with the architects, with power to modify the plans where it is found desirable, and to take in tenders for submission to the Governors. The purchase of the site has been completed for the sum of 3,250*l.*

Rifle Practice in the Army.—Mr. Cave Thomas has proposed that a military camp should either precede or succeed that of the volunteers at Wimbledon, and that the best shots from the different regiments should be annually sent to it to compete for prizes. This would not only add an interest to life in the ranks, but very soon produce that general efficiency with the rifle which is so desirable. Recent circumstances have made it quite clear that some such step is necessary to make our soldiers marksmen.

THE FORTH BRIDGE, AND ITS ARCHITECT.

The fate of the Tay Bridge had the effect of directing public attention to the design, known to be in course of carrying out, for the erection of a still bolder viaduct over the estuary of the Forth; but the more curiosity was felt on this subject, the greater appears to have been the care exercised to prevent any particulars from becoming known. The usual and legitimate sources of information were carefully closed. At last it became known that the project was adjourned *sine die*, and then, of course, it was said that it was useless to inquire into its details.

The memoir of Sir Thomas Bouch, which has just appeared in the sixty-third volume of the Minutes of Proceedings of the Institution of Civil Engineers, has given some of the long-desired information as to the Forth Bridge, at the same time that it has described other works planned and executed by the energetic engineer whose career came to so melancholy a close. In 1864, plans were lodged for the Glasgow and North British Railway, in which it was proposed to cross the estuary of the Forth by a fixed bridge, three miles long. It was to extend from the southern bank to a point called the Stacks, about a mile above Charleston on the Fife shore. The piers were to consist of wrought-iron cylinders, supported on a wide base on the silt bottom of the river. The bridge was to be 125 ft. above high-water level, and five of its spans, crossing the fair way of the river, were to be of 500 ft. span each.

An experimental pier was prepared and partly sunk in its place, and attracted much attention among professional men at the time. After considerable progress had been made, the project was abandoned, on the failure of Mr. Hodgson's policy as Chairman of the North British Railway. In 1873, however, Mr. Bouch projected a work of a much bolder kind. He removed the point of crossing to Queensferry, where the width was much reduced, but the depth much increased. Taking advantage of the position of the island of Inchgarvie, which is in the middle of the estuary, for the foundation of a central pier, the engineer proposed to cross the deep-water channels on either side by two spans of 1,600 ft. each, at an elevation of 150 ft. above high-water level. The piers were to be formed of iron columns, strongly braced, and the height of each from the foundation was 600 ft. Each span was to be supported by suspension-chains, having a deflection of 375 ft., strong lattice girders forming the support of the roadway.

The directors of the several railway companies interested in obtaining a bridge over the Forth consulted a committee composed of Sir John Hawkshaw, Mr. W. H. Barlow, Mr. G. P. Bidder, and Mr. T. E. Harrison. At the suggestion of these engineers, an elaborate analysis of the design was made by Mr. W. H. Barlow and Dr. W. Pole, assisted on some points by the Astronomer Royal. On the 30th of June, 1873, these gentlemen sent in their report, after examining which the four referees above-named reported:—"It affords us great satisfaction to be able to give our sanction to a work of so imposing a character, and to express our high approval of the skill, scientific research, and practical knowledge which have been brought to bear upon the elaboration of this interesting work."

On a testimony of this unequivocal nature a company was formed, in 1878; the contracts for the Forth Bridge were let, and on the 30th of September in that year the work was commenced. The fate of the Tay Bridge, on the 28th of December, 1879, alarmed the directors. The Board of Trade were awakened to the fact that their own responsibility was likely to become serious, and they made large demands of security; and the Forth Bridge Company resolved to abandon the undertaking, or to wait for a more convenient season for its prosecution.

It is a matter profoundly affecting the credit of the engineering profession in the United Kingdom, that the unhesitating approval of the Forth Bridge by a committee of four engineers should be either justified or retracted. It will be remembered that, with regard to the Tay Bridge, Sir Thomas Bouch had taken the precaution of seeking the advice of some of the same engineers. It not only was proved by the logic of fact, but was clearly to be read between the lines of the evidence, that proper allowances for the possible fury of the wind had not been made in this structure. But while the engineer of the bridge was, no doubt, directly responsible in this matter, it was too much left out of sight that he was not solely responsible. It may even be questioned, considering his large occupation, and the eminence of the men whose advice he sought, and followed, as to the provision to be made against wind, whether he should have been considered as principally responsible. There is an unpleasant aspect of the matter. The public would have been better satisfied if all those who planned, investigated, sanctioned, and approved the designs of those two great estuary bridges had taken their fair share of responsibility for the disaster, and not left Sir Thomas Bouch to be crushed by the weight that they ought to have shared with him. Especially has the public a right to expect from the Institution of Civil Engineers some scientific information as to the provisions proper to be made to resist both the fury of the wind and the shocks of the ice in all railway bridges, as well as with regard to the circumstances under which structures proved by the event to be totally unsafe have been designed by engineers, sanctioned by Parliament, built by contractors, examined and passed by the Board of Trade, and overthrown by the ordinary action of a Scottish winter.

On the 29th ultimo, on the motion of Sir C. Forster, the House of Commons resolved to consider, in Committee, on May 2, the repayment of the money deposited as security for the completion of the Forth Bridge Railway. This marks the final abandonment of the scheme.

FORTHCOMING FOREIGN EXHIBITIONS.

The patent and trade-mark exhibition which was opened on May 1, at Frankfurt-on-the-Main, will be open until the end of September, and includes, besides, exhibitions of balneology, horticulture, art, and local industry. The participation of German exhibitors is very large, and many Austrian firms have also entered. The managing committee is publishing an Exhibition Gazette, which appears twice a week, and some numbers of which are in our hands. The first number contains a ground-plan and description of the exhibition, as well as a remarkable article on the value and utilisation of patents of invention. The exhibition occupies an area of 55 acres, one-fourth of which is covered by buildings.

An industrial and fine-art exhibition, similar to the exhibition held last year at Düsseldorf, and which attracted so many visitors from England, will be opened on May 15 at Stuttgart, the capital of Würtemberg, and the centre of the jewellery and fancy trades of Southern Germany. Formerly the jewellery manufactured in the South of Germany used to be of the worst and flimsiest description; but it may not be generally known that, with the aid of schools of art and technical colleges, the quality and workmanship has been raised to such a high standard that, at the present day, it competes successfully with the best English and French goods, not only on the Continent of Europe, but also in England, our colonies, and in South America. The display in this branch is expected to be the best and most complete ever shown in Germany. Next in interest will be the exhibits of the numerous manufactories of real plate, plated wares, fancy ornaments, brass and bronze articles, which are produced in the best Mediæval and Renaissance patterns; glass ware, art pottery, and the exhibits of the numerous manufacturers of high-class musical instruments. There are also in the neighbourhood of Stuttgart several large establishments for the construction of agricultural machinery, railway rolling stock, engines and carriages, and a good many spinning-mills, all of which will exhibit. This exhibition is well worthy the attention of Englishmen.

In the Prussian province of Silesia an industrial exhibition will be held from May 15 to October 1.

A special exhibition of machinery, tools, and materials, for smiths, will be held at Hanover between May 27th to 30th, in the rooms of the Odeon of that city.

A building exhibition will be held at Brunswick from July 1st to October 1st of this year. May 1st was the last day for entries; June 15th is that for the delivery of exhibits.

A linen exhibition and fair will be held at Kesmark, Hungary, from July 15th to 17th. The exhibition will comprise textile manufactures, machinery, and implements, or improvements therein, for the preparation or manufacture of flax, as well as looms and weaving machinery and implements; also works referring to the preparation of flax and the manufacture of linen. Applications, in duplicate, were to reach Herr Paul Kéler, advocate, Kesmark, the president of the exhibition, by May 1st. Objects for exhibition must arrive by June 15th.

Enough has already been printed about the electrical exhibition, or rather International Exhibition of Electricity, to be opened on August 1st, at Paris, so that we need merely record it here.

The exhibition of industrial and agricultural products at Eger (Bohemia), together with an exhibition of objects of art industry, is intended in the first place for North-western Bohemia, but other Austrian as well as foreign exhibitors will be permitted to send in. The exhibition includes raw materials and industrial products, and is to last from August 18 to 30, but that term will probably be extended. Applications for admission must be addressed to the Ausstellungs-Comité der Handels-und Gewerbekammer, Eger, and must be received by May 30.

An international exhibition of machinery will take place at Altona in August.

A general industrial and horticultural exhibition will open on August 25 at Colberg (Pomerania). It will close on September 7.

A permanent art and industrial exhibition is to be opened this year, at Weimar. An industrial exhibition will also be held at Halle, Saxony.

A general Scandinavian industrial exhibition is to be organised this year at Stockholm.

In Buenos Ayres, the capital of the Argentine Republic, an exhibition for the South American continent will be opened on October 1st of this year, to which all nations are invited. That exhibition was to have taken place in 1880, but, on account of the war, had to be postponed. It is expected that European countries will participate largely, for it is the question of gaining or keeping the market of a country the industry of which is yet in its infancy.

At Nürnberg a Bavarian national industrial exhibition is to be held in 1882.

A Swiss industrial exhibition is to take place in 1883, at Zürich. It is the intention to enlarge this exhibition to an international one; but, as Switzerland has no law protecting inventions, this project will probably fall to the ground.

It is proposed to hold an international exhibition in March, 1883, at Teheran. The Shah is said to be in favour of the scheme.

The holding of an international exhibition in 1883 at New York appears to be assured, the exhibition commission, presided over by ex-President Grant, having issued invitations for subscriptions to raise the required sum of four million dollars. It is proposed to utilise the old Philadelphia (1876) exhibition building, and to carry it to New York.

The proposed international exhibition to be held at Rome will most probably take place in 1888. Committees have been formed in all the principal towns of Italy, and an estimate has been obtained. It is calculated that the outlay will be fifty million francs, of which ten will be covered by a national subscription, fourteen by entrance-fees, eight by a lottery, one by rent. Of the remainder, five millions, it is calculated, will be realised by the sale of the old material; eight will be contributed by the Government; two millions and a half by the City of Rome, and one million and a half by the province of Rome.

In connexion with the permanent building exhibition in Berlin, which has been open since 1876, in the "House" of the Berlin Society of Architects, a permanent patent exhibition is to be arranged, in which all inventions patented in the German Empire will find a place. The aim in organising this exhibition has been to afford inventors an opportunity, without incurring heavy expense, of bringing their inventions before the public, and thus to draw the attention of interested persons to the matter. The exhibition is likewise to afford manufacturers an opportunity of selecting patents. The exhibition will be arranged in the hall of the Architects' House (Wilhelmstrasse, 92), and it is not intended at present to receive large machinery and to show it at work. Only models will, in such cases, be admitted. The charge for space will be 1*l.* per square mètre for three months. Foreign and German publications dealing with patents may also be exhibited.

THE LAW OF LIGHT: A RECENT DECISION AND THE COMMITTEE OF THE INSTITUTE.

Whatever may be the practical result of the labours of the recently-appointed committee of the Institute on the law of light, the report of a lately-decided case renders it advisable to call our readers' attention to the subject, as we have done from time to time, whenever an important decision on this question has found a place in the regular legal publications. The case to which we refer is that of Allen *v.* Taylor, 50 *Law Journal* Reports, Chancery Division, p. 178, reported too late to find a place in the recently-published "Digest of the Law of Light."* But this decision has not made any alteration in the law, and it only reiterates and makes clearer what every one who has closely studied this question already knew. Still it shows that litigation will take place upon points which should be perfectly clear, and the case, therefore, cannot be passed over without notice. The main principle of law is laid down in the "Digest of Light" to which we have already referred in the first part of Article 5 (p. 9), in these words, "The grant of a tenement carries with it the right to the light over a servient tenement in the possession of the grantor, and is enforceable against him and his assigns." No one who is not a lawyer can find any difficulty in understanding this statement, and the illustrations which follow make it perfectly plain. Now, let us look at the facts of this case of Allen *v.* Taylor. A man died in 1863 possessed of a piece of land with two houses on it, and of an adjoining piece of land without houses. One of these houses had ancient (though that is immaterial) windows overlooking the piece of land. The three trustees in whom the testator's property vested sold these two properties by deeds executed on the same day, the part in land and houses to one of the trustees, and the part in land alone to another of the trustees, as they were empowered by the testator's will to do, and then he in whom the land was vested began to build, so as to block up the ancient lights. Now, taking the principle of law as previously stated, it is pretty clear that there could only be one result to such a case as this, assuming, of course, that there was a substantial deprivation of light, namely, the success of the plaintiff. "The particular case before me," said the Master of the Rolls, "is one of the strongest cases of this kind (namely, that if any right to light is to be reserved, it must be expressly reserved in the grant) which I ever saw." Therefore, we have the principle that a man cannot derogate from his own grant, and, as stated before, that a grant of a tenement carries with it the right to the light over a servient tenement, first of all, when a man who possesses a house and land grants the house first, and secondly when he grants the house and the land contemporaneously. And we have also this principle of non-derogation in a third form, namely, when a man grants land reserving to himself the houses. Here "the grant of the tenement gives the grantee the right to prevent the light from accruing to such building." Therefore, we hope that the public will see that, on this point at least, the law of light is clear.

And this suggests to us some further remarks on this question of the law of light which is now attracting some extra attention from the action of the Institute. "It is suggested," said Mr. Roger Smith in the paper, which he recently read before the Institute, "that some provision should be made for defining by sechedule, or by means of rules to be framed by the judges or vice-chancellors, the rights that are possessed by the owners of ancient lights." We very much hope that the committee will make no such utopian suggestion as that the judges should frame rules on the law of light. The judges are not legislators, and if any such proposition were made it would only make the whole report ridiculous. Next, we do not think that there is any doubt whatever as to the main principles of the law of light. The decisions of the courts, and especially of the present Master of the Rolls, have from time to time in recent years made the law clearer and clearer, and in the last ten or fifteen years the principles of this branch of our law have been very much elucidated. In all litigation on this subject there is, it is true, much uncertainty, but that uncertainty is inseparable from the nature of the subject, because no one off-hand can possibly say whether a right has or has not been substantially infringed. And we do not for one moment believe that any change can prevent persons bringing actions, and often unfounded actions, for deprivation of light in London and the large provincial towns, except under some general rule that the height of buildings and the width of street must correspond, and by abrogating wholly the existing law that a man has a right to a reasonable amount of light without regard to any scientific rules or formulæ. As regards the question of prescription, the general tendency of legislation is clearly adverse to the contention of those who consider that rights by prescription are gained too easily. It is only recently that the title to land by prescription has been made more easy by lessening the statutory period for the recovery of land under the Real Property Limitation Act, 1874. Broadly speaking, if a man without a title can remain in possession of land for twelve years, he has now a title to it instead of having to be in possession for twenty, as under the previous Act. And, if you give a man this facility to keep land which is not justly (so to speak) his, it is pretty obvious that the Legislature is not very likely to go back and go against the modern current by making the prescriptive period longer by which to obtain a title to light. We do not, in fact, see that there is any middle way in this matter. The law as to the right to light must exist as now—and we should like to see evidence largely taken as to the benefits or disadvantages of the present system,—or it must be abrogated altogether,—at least so far as not to allow rights only maturing but not yet perfected to become solid. Whether it is possible or likely that the law should be wholly repealed can, of course, only be a matter of conjecture; our own impression is that the idea of a right to light is too deeply rooted in the minds of the people of this country, and has been too long a part of our jurisprudence, to make such repeal possible, and that it could never have any strong public feeling in its favour. Theoretically we regard the right to light as one which would be better repealed. In many cases, when any dispute arises, the only result is to enable the possessor to put some money in his pocket, and not to preserve to him the use of the light for purposes of health or trade; and, that being so, it would seem to be advisable that it should not exist. But, as we are not thinking of "legislating for Saturn or Jupiter," it is pretty clear that the law will remain as it now is, and that we shall see no change in regard to it. No doubt, we shall have an interesting report from the recently-appointed committee, but that we shall have any real radical change,—we use the word in its true sense,—proposed, we do not think at all probable. Mr. Locock Webb's views on the subject are conservative, as we know from his speeches and papers on this subject; probably the views of the other lawyers are of the same complexion, and they are likely to have much weight on a legal subject such as this. The net result of the labours of the committee, which we look forward to, is, some months hence, another interesting evening's discussion on the law of light *àpropos* of the report.

SANITARY CONDITION OF THE ISLE OF WIGHT.

Dr. Ballard, on the part of the Local Government Board, has made an elaborate report on the Sanitary Condition and Administration of the Isle of Wight, to which the local authorities must give immediate and most serious consideration if they desire to preserve the reputation of their island as a health-giving resort. We quote a few paragraphs here and there to justify this assertion:—

Urban Sanitary District of West Cowes.—"There is no ventilation of the sewers at the heads of the outfall pipes, nor any worth speaking of in the course of the sewers; so that, inasmuch as the roadside gullies for the surface water, which is carried into the sewers, are all trapped, the chief escape for sewer-air, generated in the sewers themselves, is at the various inlets of drains in and about the houses. The danger of this state of things is enhanced by the pressure of water entering the outlet-pipes at each rise of the tide. I myself experienced discomfort from stinks arising from the gully openings in the streets, and I heard from various inhabitants several complaints of the same nuisance. This would be obviated by such free openings as would prevent the accumulation of sewer air, and by keeping all inlets in a clean state. The sewers are never flushed (trapped though they were), although the medical officer of health has more than once urged this practice upon the Local Board.

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* A Digest of the Law of Light. By E. S. Roscoe, Barrister-at-Law, Hon. Assoc., R.I.B.A. Reeves & Turner, Chancery-lane.

In the newer parts of the town the houses are connected with the sewers by means of pipe-drains, and the surveyor tells me that he believes that the house-drains in the older parts are mostly constructed with glazed pipes. But certainly some (probably many) of the house-drains in the older parts are constructed of brick, and some such, destroyed more or less by rats, have been reported by the medical officer of health; and one thus riddled with rat-holes was seen by myself. Very few, indeed, of the house-drains are ventilated,—even in the best class of houses. Water-closets are in universal use in the town; where situated,—as they are in the best houses,—within the houses themselves, they are supplied by water from a cistern; elsewhere they either have no water laid on to them, or the water is (in a few instances) supplied by a pipe direct from the town mains."

"Since 1871 the town has been considerably extended by the erection of new residential buildings, but inasmuch as there have been no building byelaws in operation here up to the time of my inspection (although certain byelaws have recently been sanctioned), these houses have been erected without any supervision by the Local Board.

The chief increase has been of houses rated between 10*l*. and 20*l*., and the next largest increase has been of houses rated between 20*l*. and 40*l*.

Some of the houses occupied by the poor I found in a sadly neglected condition, dirty and dilapidated in such a way as to set domestic cleanliness at defiance. Some of the houses I visited were pervaded with a smell of drain air."

"I gather from the reports of the Medical Officer of Health, and from the conversations I have had with him and with other medical gentlemen practising in Cowes, that for some years past enteric fever has largely prevailed there, not only in the lowest and poorest part where the district is (as mentioned before) liable to be flooded from time to time, but in other parts of the town also, and even in the new streets at the highest elevations. No parts of the town and no class of houses appear to have been spared, and visitors who have come there for health have carried away the contagion with them to their homes elsewhere."

"The sanitary administration of the district, judging from the reports of the Medical Officer of Health, and from my own inquiries, appears to have been exceptionally defective."

District of East Cowes.—"The town was sewered in 1862 by means of a long brick tank sewer in the principal street, and pipe sewers elsewhere. Arrangements were also made for flushing, but no flushing has been performed, neither has any provision been made for the ventilation of the sewers. Various engineering mistakes, and in some places bad workmanship and bad management, have interfered from time to time with the proper and efficient operation of these sewers. Up to the present time, a great and important part of the new town on the slope of the hill has remained unsewered, the houses being in such cases drained into cesspits, which having overflows on to the surface of the ground or into ditches, have been the cause of many nuisances. The Local Board, however, have now adopted plans for extension of the sewers into these parts of their district, and for the amendment of mistakes committed in their existing sewers. The house drains are usually 6-in. glazed pipes, but sometimes are constructed of common earthen pipes. None are ventilated. The Local Board have provided for the water supply of part of their district by tapping the gravel bed at the summit of the hill, and by conducting the water into two reservoirs capable of containing respectively 500,000 and 100,000 gallons. But the supply thus obtained is insufficient in dry weather, while in wet seasons a good deal of water which might be stored, were there more storage space provided, runs away to waste."

"The scavenging of the district is fairly performed by the Local Board. Building is actively going on, but no supervision is exercised over it by the Local Board, whose building by-laws are most defective. This is unfortunate, since by the neglect of such supervision the Local Board are laying up for themselves much trouble in the future, and losing a grand opportunity of providing for the healthiness of what is assuredly about to become a considerable town."

Newport.—"New houses have been erected from time to time without the necessary supervision requisite to secure the observance of such building by-laws as the Council has had. It is to be hoped that, when the new and improved by-laws now in hand shall have been sanctioned, the Council will see, in the interests of the inhabitants of the borough, that they are duly observed."

Ryde.—"Plans of new houses are examined, and the buildings are inspected by the surveyor while in progress, but their fitness for habitation, when they are finished, is not certified as required by the building by-laws of the authority. These by-laws are very imperfect in many important particulars. I understand that new by-laws, based upon the Board's model, are in course of preparation.

Animals,—pigs, cows, and horses,—are being kept in many parts of the town in a most filthy and disgusting manner. The mayor and ex-mayor, who kindly accompanied me in my inspection of the town, expressed themselves astonished and vexed at the disgraceful condition of the piggeries, cowsheds, and stables, which are met with at the rear of houses in apparently clean and respectable streets. Many of the slaughter-houses were badly constructed and arranged, and equally or almost equally filthy. Yet there are by-laws (imperfect, however, and requiring to be remodelled) for regulating all these things."

District of Sandown.—"The chief water supply is from the mains of the Isle of Wight Waterworks Company, the supply given by which is said to be constant, except at the upper parts of the district in the summer time. There are only about thirteen houses in the district to which this water is not laid on; but there are a good many wells about the town, still more or less in use. They vary from 20 ft. to 80 ft. in depth; one at the Sandown Hotel is very much deeper. Several wells have been closed on account of their pollution, and few of them can be regarded as safe sources of drinking-water. But neither is the public water supply free from suspicion. From time to time complaints have been made of its dirty condition and apparent unfitness for drinking. One such complaint was made to the medical officer of health in March this year, and a letter of his to the Local Board upon the subject lies before me as I write. The account he gives of the sample of water referred to is that it had a disagreeable smell like sea-weed or shell-fish; that it deposited a copious sediment, part of which consisted of a thick layer of vegetable matter, the fluid above being of a muddy greenish colour; and that the sediment under the microscope presented 'cellular structures of vegetable nature, with floating bodies of animal origin.' Yet the water is believed to be subjected to filtration before being distributed. The value or efficacy of this filtration may be readily judged of. Further, the source from which this water is taken is the Eastern Yar river, which commences by two streams, the one at Niton and the other near Wroxall, both issuing from the north side of the chalk downs. Between Godshill and Arreton these streams unite in the Yar, which, receiving various contributions of land drainage in its course, passes near Sandown on its way to Brading harbour. I inspected this river in a great part of its course from Niton and Wroxall downwards, and I found that not only did it at flood times receive the ordinary pollutions from pastured land to which such rivers are subject, but that it received worse and far more dangerous pollutions in its course from domestic sewage and human excrement, little if any pains having been taken by the Company or by the Local Authority (the Rural Sanitary Authority), which has, under the Rivers Pollution Act, power to prevent its pollution by these filthy matters."

District of Ventnor.—"I was informed by the chairman and manager of the company that the water from the Grove-road reservoir was only used when the supply of tunnel water was not sufficient; and the latter is not adequate to the supply of the town in dry weather. At other times the excess of water from the Grove-road reservoir has flowed away by a waste-pipe or conduit, into the public sewer. The overflow from the upper reservoir at the pumping-station also passed into the same sewer. The overflow from the upper reservoir was imperfectly and unsafely trapped; the trap was out of sight underground, and could not be found and exposed for my inspection until after a short search. The overflow-pipe from the lower reservoir was believed to be trapped, but no one could tell me anything about it. On investigation I found that it was wholly untrapped, and that from the time that the overflow was conducted into the sewer, up to the time of my inquiry, a period of several years, there had been a free communication between the town sewers and the reservoir in question, and that therefore the water of this reservoir had been exposed all that time to absorb sewer air conducted to it through the waste-pipe. On my pointing out this serious fault to the Local Board, the Company immediately took steps to disconnect the overflow altogether from the sewer."

"There are some imperfect building by-laws, but they have been inoperative. There has been no systematic supervision of new buildings, and new houses have not been certified as fit for occupation before being inhabited."

"The great prevalence of phthisis in the rural district, as indicated by 11·4 per cent. of all the deaths of residents in 1878, and 10·6 of all the deaths in 1879 being due to this disease, does not appear to have received adequate study. How far it may be due to inheritance from the many consumptive outsiders who have used the island cannot be said. But whatever the way in which the native population have come by their tendency to consumption, it is of great importance for the Sanitary Authority to recognise the power of sanitary measures applied to the soil on which people dwell, and to the houses in which they are lodged, to counteract this tendency; more exact attention than heretofore should be given to such matters as the dampness and bad ventilation of houses, and the Local Authority would do well to obtain powers to regulate by proper by-laws the construction of new houses, so as to secure their wholesomeness as habitations."

WRECKING A CHÂTEAU.

Auctioneers cannot be said to be in the habit of showing much embarrassment in the management of saleable property, especially Parisian auctioneers, — those *commissaires-priseurs*, as they call themselves, through whose hands pass so extraordinary a variety of objects, — when even the sale of a Renaissance château, removed in pieces some hundred miles, scarcely causes the slightest disturbance in the usual routine of the ordinary business of the season. Some time since we referred to the half serious report that an energetic Parisian dealer had actually purchased, demolished, and removed to Paris an old French château. The report was, in fact, founded on truth.

The sale of the sculptures of the Château de Montal, *chefs-d'œuvre*, as the bills call them, and with justice, "of the French Renaissance," has been lately largely advertised in Paris. These sculptures form, or rather formed, till their removal, the very characteristic external decoration of the historic Château de Montal, built between the years 1484 and 1534. These interesting relics have been ruthlessly torn from their original home in the South of France,—Montal is in the department of Lot,—and transported to Paris,—report has rumoured the railway charges at something enormous,—and have been now exhibiting for some weeks past to the numerous class of art-lovers and treasure-seekers that abound in the French capital. Two of the capacious sculptors' studios that line the busy Boulevard de Clichy have been filled with these relics, really beautiful works, whose merit scarcely suffers even from so trying an examination. With regard to their presence in Paris, and the novel experiment of their sale, the sole explanation publicly afforded is that the sum required from the owner of the château for its restoration having been more than he was desirous to expend, he determined,—though the reason is still a little strange to understand,—to submit to the decision of the auctioneer's hammer the fate of the precious relics, which, piece by piece, he carefully removed after a due register of their original position, and the preparation of a plan of the edifice.

Before the reputation it now has attained, the Château de Montal was not unknown among the many historic châteaux of France; its chief interest and beauty lay in the exceptionally artistic sculptures with which it was decorated, and to which description can little hope to do justice;

suffice it to say that they belong to what is understood as the French Renaissance, that is to say, they strongly bear the impress of Italian influences. The gables, doorways, and chimney-pieces which have been removed certainly justify, now that they have been seen in Paris, the praise they had received when in their original place. The frieze which ran above the ground-floor is a charming specimen of Renaissance bas-relief arabesque decoration, while scarcely less admiration is due to the delicacy of the chimney-pieces and doorways.

SAVING BUILDINGS BY ELECTRIC FIRE-ALARMS.

When the architect has exercised his skill in the erection of fine imposing buildings, it may be reasonably supposed that he is also interested in their preservation from fire, for man naturally glories in the contemplation of his work! We may, therefore, take it for granted that it is a matter of no small interest to the architectural profession to observe what means are provided in their centres of activity for preventing the arch-enemy "fire!" from annihilating productions, which, perhaps, no amount of time or money could ever replace in their integrity if once so destroyed. But the subject we have here introduced claims additional interest, because it has assumed a direction comparatively new to most readers. Though the introduction of fire-brigades, for the saving of life and property, is by no means new, it is only of recent years that practical science has been able to introduce electricity as one of the most advantageous resources attending outbreaks of fire. Were proof required, we might conveniently look to our large cities, as well as to Continental towns, to find that electricity is now largely employed for subduing the severity of conflagrations. Nor is this to be wondered at when we know, on the authority of the Metropolitan Fire Brigade, that the first five minutes of a fire-outbreak are worth more, from an extinguishing and salvage point of view, than the succeeding five hours can possibly be: hence, may we not ask what quicker agent could we call to our assistance for communicating fire-alarms than the electrical current? The answer is evidently, none; but as the electric fire-alarm system, introduced in London, has been already described by ourselves, we propose paying special attention to the electric systems introduced elsewhere, so that, by expounding their working to public notice, we may see if we can improve our system by the experience gained by our neighbours.

If we begin with New York, as a city harmonising more with English customs than any other, the electric fire-alarm system there introduced enables the occupants of a house on fire to signal the outbreak without leaving the premises, inasmuch as the fire-alarm is placed inside the house, and so rendered accessible to its inmates. In this manner some 925 alarm-boxes are spread over the town, commanding sixty wires, all connected with the head office, whilst the extent of this special telegraphic network amounts to 700 miles. These boxes have each numbered keys, the receivers simultaneously holding themselves liable for their proper use. To further avoid false alarm, when a key is once inserted, it cannot be withdrawn without the use of a second key, which is, however, left to the sole custody of certain firemen. A second system is introduced in New York, which is carried out by the "Automatic Signal Telegraph Company." This company transmits any fire-alarms it may receive at its sub-offices straight on to head-quarters in such a manner that the request and address of the applicant are at once read off an indicator dial. In America, the fire-brigade stables are arranged, as a rule, side by side, with the engine-house, and as a fire-alarm is received, the horses are led automatically under the action of the electric current in front of the fire-engine, to be there harnessed. This is accomplished by connecting the halter to an arrangement of rods, which render the action of the alarm-bell, leads the horses forth, and places them in position. Greater refinement has, in fact, been used; for at San Francisco the harness is kept suspended over the engine shafts. In this case, as soon as the horses are placed underneath the harness, it is allowed to fall, and while the driver mounts his seat, the various harness buckles are fastened, and it is estimated that in fifty seconds from the time of alarm, the fire-engine is quite ready to start. But the electrical agency accomplishes more than this at San Francisco; for even the drawing of the bolts and the opening of the fire-station doors are done by electricity, so that these ingenious devices generally allow the engine to reach the scene of the fire in two minutes' time.

In Germany and in Holland, street fire-posts are used, with various ways of working them; and when automatic, they are at the disposal of the public, though their control is at times confined to specially-appointed persons. To transmit a fire-alarm to head-quarters, a piece of glass is first broken, which enables the sender to pull a ring, which action forwards the message. In addition to London, Verviers and Frankfort have adopted this system.

As an outbreak of fire is instantaneously attended with an increase of temperature, the use of the thermometer which answers to such atmospheric changes has similarly been applied, by allowing the rising mercury in the tube to complete an electric circuit, which should then raise an alarm. Beyond this the electric current thus generated has even been allowed to open water-taps or steam-valves into the rooms on fire, as Sanderson & Proctor's steam fire-extinguishing method practically demonstrates. Thermometers are at times found replaced by metallic bands, made of two unequally expanding metals, which, under the heat generated by an outbreak of fire, close a metallic circuit in which a pile and an electric bell are placed.

In Paris, alarm of fire can only be made by addressing a police or a fire-engine station, hence the electrical circuit merely sets up intercommunication between these last-mentioned stations, or with a central station, for the purpose of requesting additional aid. The fire telegraphic network of Paris is about 144 miles long, and the wires are placed underground. The head-quarter is connected with eleven fire-stations, in addition to other public offices.

If we now turn to Belgium, its Government has been petitioned to allow telegrams merely conveying outbreaks of fires to the stations to pass without pay, and, to further encourage this speedy transit of fire-alarms, it is suggested that this free concession shall be notified to the public use by affixing conspicuous placards to this effect in front of every telegraph-office.

Having thus passed the most important of the foreign fire-alarm systems under review, we leave the public to take them at their value, though statistics prove that in cases where no telegraphic fire-alarms are given, large fires still amount to 27 per cent., whereas with the assistance of telegraphic lines used without fire-alarms, severe fires still amount to 17 per cent., whilst these extensive conflagrations have been reduced to 4 per cent. of the total number of fires where the improved systems of electrical fire-alarms have been introduced.

PHOTOGRAMMETRY.

At a recent meeting of the Society of Architects and Engineers at Aix-la-Chapelle, a paper was read on the measurement of objects of architecture, ground, &c., from photographs. The speaker exhibited to the meeting a number of results of this method of measurement. The interest they excited was considerable. Some of the professors and students of the Technical High School of Aix-la-Chapelle were, last summer, travelling together for the purposes of study, and, amongst other things, had made measurements and sketches of several edifices in Colmar. They had likewise taken photographs of the same structures with the apparatus furnished by M. Meydenbauer. The geometrical drawings, which were executed in accordance with the photographs agreed precisely with the sketches which had been made on the spot. But while these sketches had taken a whole day's hard work to complete, the drawings taken from the photographs, which were equally accurate, were done with ease in a comparatively short time, while the photographs themselves were of course taken in a few minutes. Besides the photographic drawings, whose accuracy was obvious from direct comparison with the ordinary drawings, other pieces were shown which illustrated the nature and importance of this new branch of art, to which the term "Photogrammetry" has been applied. The word may not be free from objection, but there is no doubt that the thing it refers to is a matter of high importance to architects and engineers. Thus there were shown plans and views of a mosque at Shiraz, belonging to the ninth century, but the very name of which is not known. In this instance the photographs were taken by the Meydenbauer apparatus by Dr. Stolze, a member of the expedition for observing the transit of Venus in Persia. The time occupied was, of course, only an hour or two, and the drawings were afterwards prepared at leisure at home. Any attempt to take drawings of the building by the usual method on the spot would have roused the fanaticism of the natives, and would, indeed, have been impossible. The lecturer explained the theoretical principles of the photogrammetric method of measurement. Practical exercises under Professors Ewerbeck and Henrici at the Technical High School have shown that the method is very easily acquired. It is particularly valuable in cases where there is a want of time or of personal ability to take an ordinary drawing.

A RIGHT RECOGNITION.

The Rev. John Raven, residing without cure at West Hoathly, in Sussex, has for some time, with his family, worked hard among the villagers and among the people engaged on the new railway there, now approaching completion. During the late snow-storms, for example, he established a soup-kitchen for the navvies, and kept it open till the weather enabled them to work again, literally saving them and their families from starvation. Mr. Raven being about to leave the neighbourhood, it was thought that he ought not to do so without some evidence of his neighbours' appreciation of his disinterested labours: so an esteemed and energetic lady amongst them went to work, wrote letters, and gathered in subscriptions. The railway folks, contractor, and engineers, were anxious to aid, and gave the men and boys the opportunity to add their names to the list with even 1d. or 2d. attached. Some of the signatures, such as "Nobby Williams," written in all seriousness, and "Ginger," are worth the money. The result has been a very handsome silver salver, bearing these lines,—"Presented to the Rev. John Raven, by his friends and neighbours of West Hoathly and the new railway, in grateful acknowledgment of the valuable services he has rendered them during his residence in the parish," with crest, motto, and date added, not to mention an appropriate memorial to the younger members of the family. We commend this example to the attention of other communities among whom men and women are working unostentatiously for the public good, and who, simply through want of thought, are allowed to labour on without any mark of recognition or evidence of appreciation.

OBITUARY.

Mr. Thomas Brown, partner in the well-known firm of Messrs. Innocent & Brown, architects, George-street, Sheffield, passed quietly away upon the night of the 29th ult. Mr. Brown was a Sheffield man, and an artist of no mean ability,—one that Sheffield can ill afford to spare. The set of Board schools,—between twenty and thirty of them, that Messrs. Innocent & Brown built in Sheffield and its neighbourhood,—are, perhaps, in many respects the finest series in the country; and besides for these schools, Mr. Brown's name, in conjunction with his partner's, is well known in the North of England in connexion with a large number of important and well-designed buildings. Mr. Thomas Brown served his articles to Messrs. Hadfield & Goldie, architects, of Sheffield, and some sixteen years ago entered into partnership with his friend and fellow-worker, Mr. C. J. Innocent, a connexion that, amidst much mutual esteem, has continued to the end. For several years his health has been indifferent, and, taking to his bed on Easter Monday, he succumbed to his fatal complaint on Friday night. Mr. Brown, who was thirty-six years of age, was twice married; and leaves a widow and young family to mourn,—with all who knew him,—his loss.

Mr. Henry Dodd.—At the Hall at Rotherfield, on Wednesday, the 27th ult., died Mr. Henry Dodd, of the Eagle Wharf, City-road, well known in the parish of St. Luke as a large contractor. Mr. Dodd was a self-made man. He inherited from his father nothing beyond a good example for industry and integrity; but with such guiding stars he rapidly rose to independence and affluence. Perhaps his first steppingstone was a severe frost and fall of snow which impeded the traffic of the City. This he contracted to remove, and gained credit and money in doing it. He then worked a large district of ground to the north of London, between the City and Islington, for brickmaking, with great success; and then he formed a similar establishment at Yeading, near Uxbridge. It is something to be written of as follows:—"I should be doing injustice to my friend, Mr. Henry Dodd, were I not to point to his excellent management, and the consequent sobriety and good conduct of his men. His extensive establishments prove what can be accomplished when the master is philanthropic, and when he does not consider his duty accomplished in paying his men their wages, and in exacting the full amount of their labours."—("On the Scarcity of Home-grown Fruits, with Remedial Suggestions," by C. Roach Smith.) This encomium followed remarks on the general degradation of brickmakers' labourers, and the utter neglect, socially and morally, in which they are left by their masters. To the stage Mr. Dodd ascribed his moral education, and when the ill-starred Dramatic College was proposed he offered land for a site. The help was at first accepted with loud praise, but when it was found that he expected the right of having the power to make a nomination, the praise was turned to indignant refusal by the committee of management. For some years Mr. Dodd had retired to his estate at Rotherfield, devoting himself to agricultural pursuits and the amenities of country life.

HOUSES FOR THE INDUSTRIAL CLASSES IN GIBRALTAR.

The great want of dwellings for the poor and industrial classes of Gibraltar, long complained of, is very shortly to be supplied, under the immediate patronage of H. E. the Governor-General the Right Hon. Lord Napier of Magdala.

The concession of land has been granted for the purpose to M. George Prosser, architect, the promoter of the scheme; the ground known as Patio Caballero. The promoter of this good work, in the assurance of the support the scheme will receive from the public, has constituted a society to be styled "The Gibraltar Association for Building and Improving the Dwellings of the Industrial Class."

The necessary funds have been already nearly raised, and the facility for paying in the amounts subscribed is so great that almost all classes are thereby enabled to make investments. The works will at once commence and be carried out with all despatch. The whole of the carpenters' and joiners' work required for the buildings has been entrusted to a local contractor, so that no delay may arise.

That the promoter of such a scheme deserves praise for the interest taken in so noble a cause must be readily admitted by all well-wishers of the industrial class, and he has a right to the support of all classes.

TIDAL AND UPLAND WATERS.

THE INSTITUTION OF CIVIL ENGINEERS.

At the meeting on Tuesday, the 26th of April, Mr. Abernethy, President, in the chair, the paper read was on "The Relative Value of Tidal and Upland Waters in maintaining Rivers, Estuaries, and Harbours," by Mr. Walter R. Browne, M.A.

The two natural agencies which tended to keep clear the channels of tidal rivers and estuaries were,—the tidal flow, *i.e.*, the run of the tide passing up and down such channels twice in about every twenty-four hours; and the low-water flow, *i.e.*, the current of water passing through such channels between the end of each ebb tide and the beginning of the next flood. It was proposed to investigate the relative value of these two agencies in preserving the full depth and section of such channels.

The following conclusions were drawn from statements made in the paper:—In the largest rivers the bottom velocity was, for practical purposes, the same as the surface velocity. In ordinary rivers the bottom velocity bore to the surface velocity a ratio which was about three-fourths at 5 ft. depth, one-half at 15 ft., and one-third at 25 ft. In tidal channels, such as the Avon, during two-thirds of the ebb, the slope of the surface was exceedingly small; and while the surface velocity was large, the bottom velocity was nil. During this period no scour' but rather deposit, was going on. For the remainder of the ebb the conditions approximated to those of an ordinary river; scour did go on, but its amount was insufficient to sweep away the silt which had been deposited, not only at the top of the tide, but also during two-thirds of the ebb. At the same time, there were certain circumstances in which the tidal waters might have a distinct scouring effect, viz., if they were so far kept back (either artificially or by soaking into wide mud flats), that a portion of them remained to increase the velocity of the low-water flow.

Opinions were quoted to show that while the author's views were opposed to those of many engineers, they were supported by others, and by numerous facts adduced in evidence before the Tidal Harbours Commissioners, and elsewhere. With regard to the practical application of these principles, it was suggested that, whether a given diminution should be made in the tidal area of any river, would be as follows:—The low-water discharge at some point below the proposed embankment should be carefully measured, and the total discharge of the inland or fresh waters should be measured at their entrances into the tidal area. The difference between the two would show the extent to which the low-water flow was increased by tidal waters. The effect of the proposed operations might then be judged of, by ascertaining how far they would reduce, not the cubic content of water passing up and down on each tide, but the area of mud, which was submerged by the tide, and thence contributed to the low-water flow.

Embankments had frequently proved beneficial rather than the reverse; a fact explained by the author's experiments, since the level of the ebb-tide would in consequence fall more rapidly, and the point at which the water at the bottom began to move would be reached at an earlier period.

NEW MUNICIPAL BUILDINGS, HASTINGS.

These extensive buildings, which are now rapidly approaching completion, are being carried out under the direction of the borough surveyor, Mr. W. Andrews, from the designs of Mr. Henry Ward, architect. The site which the buildings occupy is a very peculiar and awkward one, but, nevertheless, all the offices are good square rooms, and well lighted and ventilated.

The main building is divided by a corridor 10 ft. wide, which forms the approach to the police court and grand staircase, and from which open the offices of the town clerk, grand jury room, magistrates' private room, robing-room for the counsel and solicitors, &c. The police court has also an entrance for the general public from the road at the rear, and in connexion with this entrance are provided a good entrance-lobby and waiting-room.

On the first floor of the main building are the offices of the borough surveyor, with committee-room, and a private room for the use of the mayor. On each floor is provided ample lavatory accommodation; the jury-room and magistrates' room having each its separate lavatory, and so on.

Approaching from the station road is the police department, consisting of superintendent's offices, inspector's office, charge room, constables' room, and sixteen cells, all constructed in strict accordance with the instructions of the Local Government Board, each cell having separate w.c. and independent ventilation. Over the police department are the caretaker's rooms and spare offices.

The weights and measures department occupies the apex of the triangle on the station-road front, and consists of four good-sized and well-lighted offices.

The council-chamber, which fronts on the Meadow-road and Cricket Ground, is 50 ft. by 30 ft., and has an open roof 24 ft. high to plate, constructed in pitch pine and formed into panels by intersecting mouldings. A handsome chimneypiece, 16 ft. high, forms a feature at one end. The dado and fittings are all in oak wainscot, and the windows are filled with lead-lights and painted glass panels of the arms of the Earls of Sussex and other notables.

The principal staircase is of Park Spring stone, having marble dado and handrail and traceried stone balustrade; sculptured grotesques at the landing bear the arms of the Cinque ports. The large window on the staircase has the arms of Harold, William the Conqueror, and Queens Elizabeth and Victoria.

The corridor floors are in marble mosaic and the fittings of the police court,—which has an open roof, 20 ft. to plate,—are in oak.

The style of the building is a free treatment of Gothic, the external walls being of local blue stone with Bath stone dressings. No projections being allowed over the Cricket Ground, the council-chamber bay is recessed to form a feature of that front.

The eight large panels on the Cricket Ground front are filled with sculptured subjects of local historical interest.

Mr. Earp has executed the whole of the carved work.

The contractors are Messrs. D. C. Jones & Co., of Gloucester.

STONE AND WOOD RESIDENCE, AMHERST, NOVA SCOTIA.

On the border-land between Nova Scotia and New Brunswick, and on the line of the Inter-Colonial Railway, is situated the rapidly-growing town of Amherst. The centre of a large farming district, the completion of the railway has rendered it of increasing importance, so much so that enterprise has been directed to it, and several large manufacturing concerns are adding daily to its wealth and population.

The house we have illustrated is now being erected for Mr. Rhodes, one of the partners in the firm working the largest sash and moulding mill in Nova Scotia. Indeed, in their extensive workshops the ordinary frame houses of the country are turned out wholesale, fitted, jointed, and numbered, and only requiring to be put together like a child's toy-house. The universal building-material of the country is wood, and costly houses, averaging from 5,000*l.* to 8,000*l.* each, are frequently erected, while one near Halifax cost 12,000*l.*; yet a very commodious and comfortable villa residence may be had complete for 600*l.*; and by the use of lobby-stoves and a perfect plumbing system, which never puts pipes on an outside wall, such a "seasonable luxury" as frozen pipes is never heard of, even with the thermometer at 20° below zero.

A few houses are erected of brick and wood, or stone and wood, like the one shown here, but stone itself is so expensive, and the cost of labour so high (10*s.* a day being the average, and reaching as high sometimes as 16*s.*) that cornices, verandahs, and ornamental work generally, are almost invariably of wood, even in the cities, where it is painted and sanded,—a grand deception, it may be said, but art of all kinds is a deception in the colonies; they are the last places in the world for artists to emigrate to; we can say this, having personally met some who would almost have given their right eye had they never heard the name of colony.

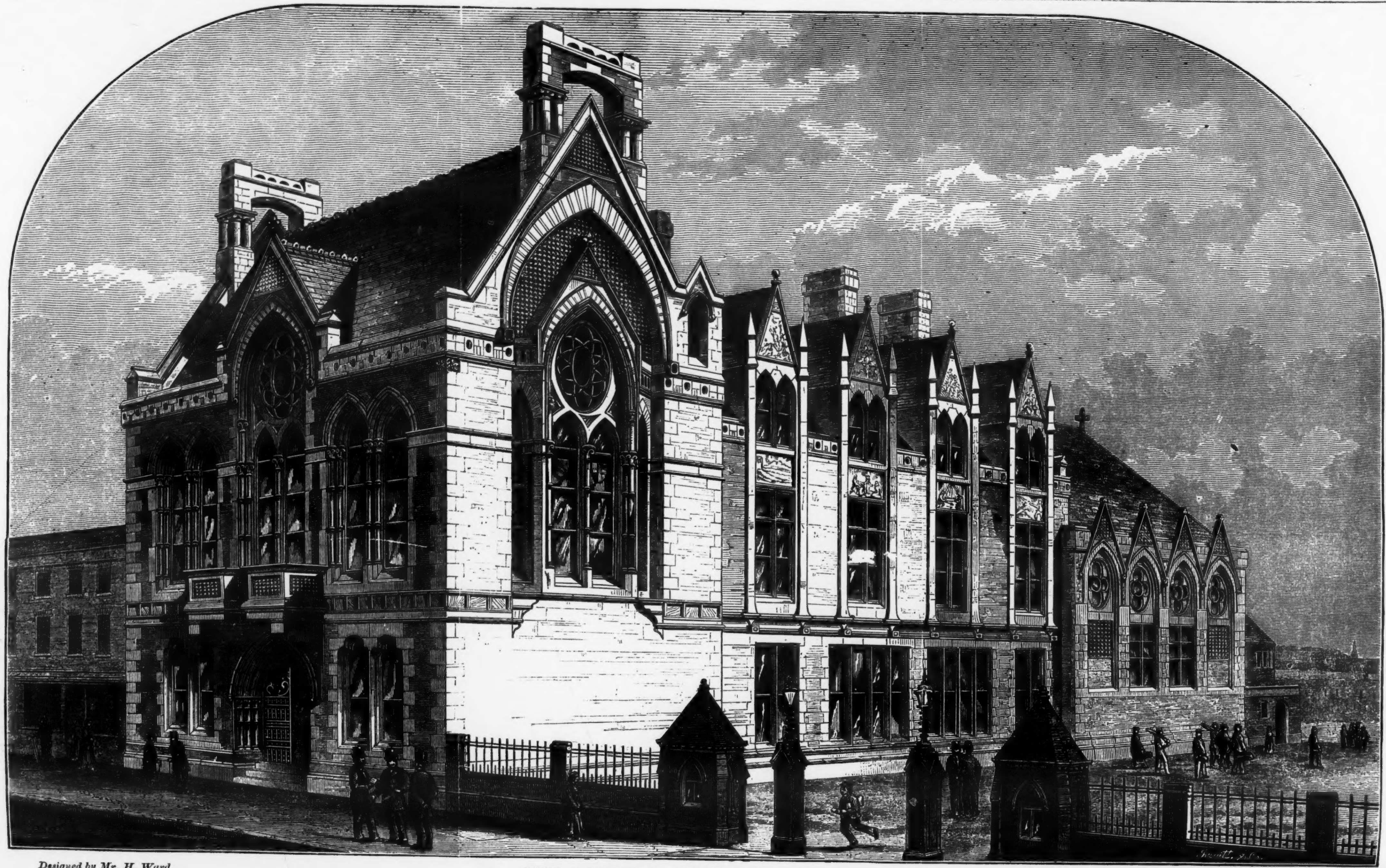
The usual colour for modern houses in the country is white,—three coats of best white-lead and oil; and owing to the purity of the atmosphere they remain almost snow-like for six or seven years.

The plan of this residence is the usual one in Nova Scotia, of a centre lobby and staircase, a dining and drawing room on one side, and a parlour and library on the other, with the kitchen and offices in a wing behind,—a service-room also, connecting dining-room and kitchen. The bedrooms are all upstairs, with bath-room and napery closets. A drawing-room is never placed on the first floor, according to the almost universal custom in Scotch villa residences.

This house, a small one, was estimated to cost in wood 800*l.*, and in stone and wood 1,100*l.*

The plans were prepared by Mr. Andrew Dewar, architect, Edinburgh, late of Halifax, Nova Scotia.

Sunday Society.—The sixth public annual meeting of the members and friends will be held in the Great Hall, Freemasons' Tavern, on Saturday, May the 28th. By kind permission of the Duke of Wellington, small parties of the members of the Sunday Society will be admitted to view the pictures and other works of art at Apsley House, Piccadilly, on certain Sundays during the summer. Members wishing to avail themselves of the privilege must make written application to the honorary secretary, at No. 8, Park Place-villas, W., for tickets, enclosing a stamped and addressed envelope for reply.

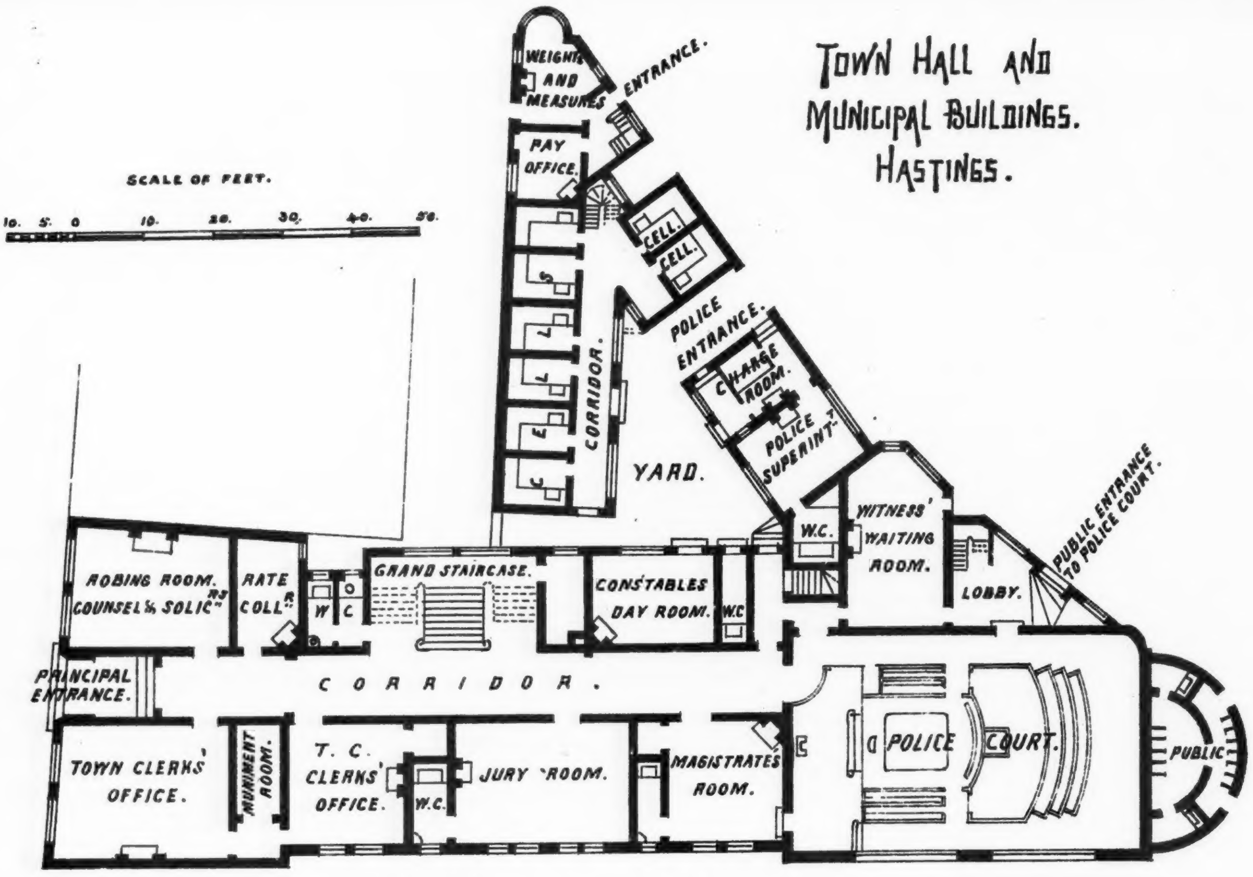


Designed by Mr. H. Ward.

NEW MUNICIPAL BUILDINGS, HASTINGS.

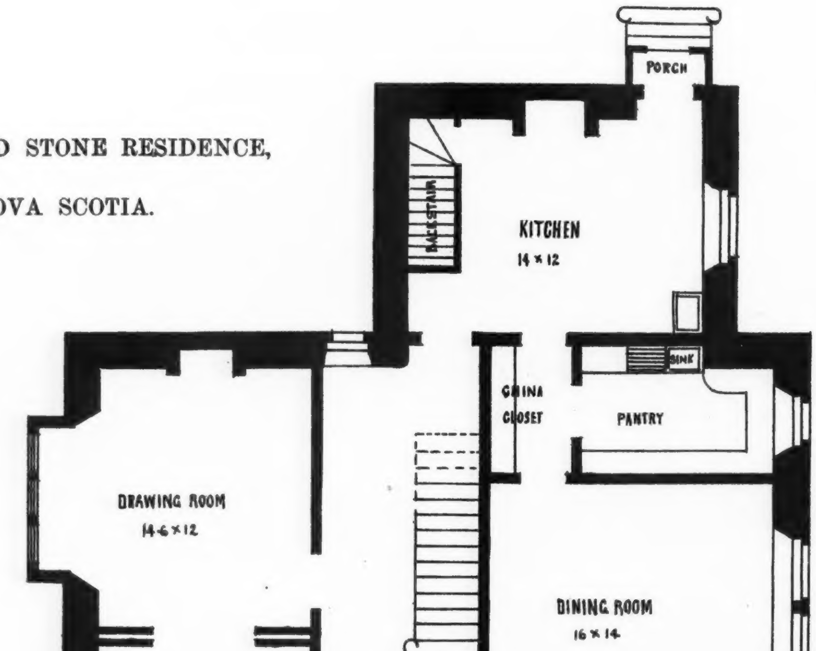
Mr. W. Andrews, Borough Surveyor.

TOWN HALL AND MUNICIPAL BUILDINGS. HASTINGS.


SCALE OF FEET.
10. 5. 0 10. 20. 30. 40. 50.
WEIGHTS AND MEASURES
ENTRANCE.
PAY OFFICE.
CELLS
CORRIDOR.
CELL.
CELL.
POLICE ENTRANCE.
CHARGE ROOM.
POLICE SUPERINT.
YARD.
W.C.
WITNESS' WAITING ROOM.
LOBBY.
PUBLIC ENTRANCE TO POLICE COURT.
ROBING ROOM. COUNSEL & SOLICRS
RATE COLLR
W.C.
GRAND STAIRCASE.
CONSTABLES DAY ROOM.
W.C.
PRINCIPAL ENTRANCE.
CORRIDOR.
TOWN CLERKS' OFFICE.
MUNIMENT ROOM.
T. C. CLERKS' OFFICE.
W.C.
JURY ROOM.
MAGISTRATES ROOM.
POLICE COURT.
PUBLIC

GROUND PLAN.

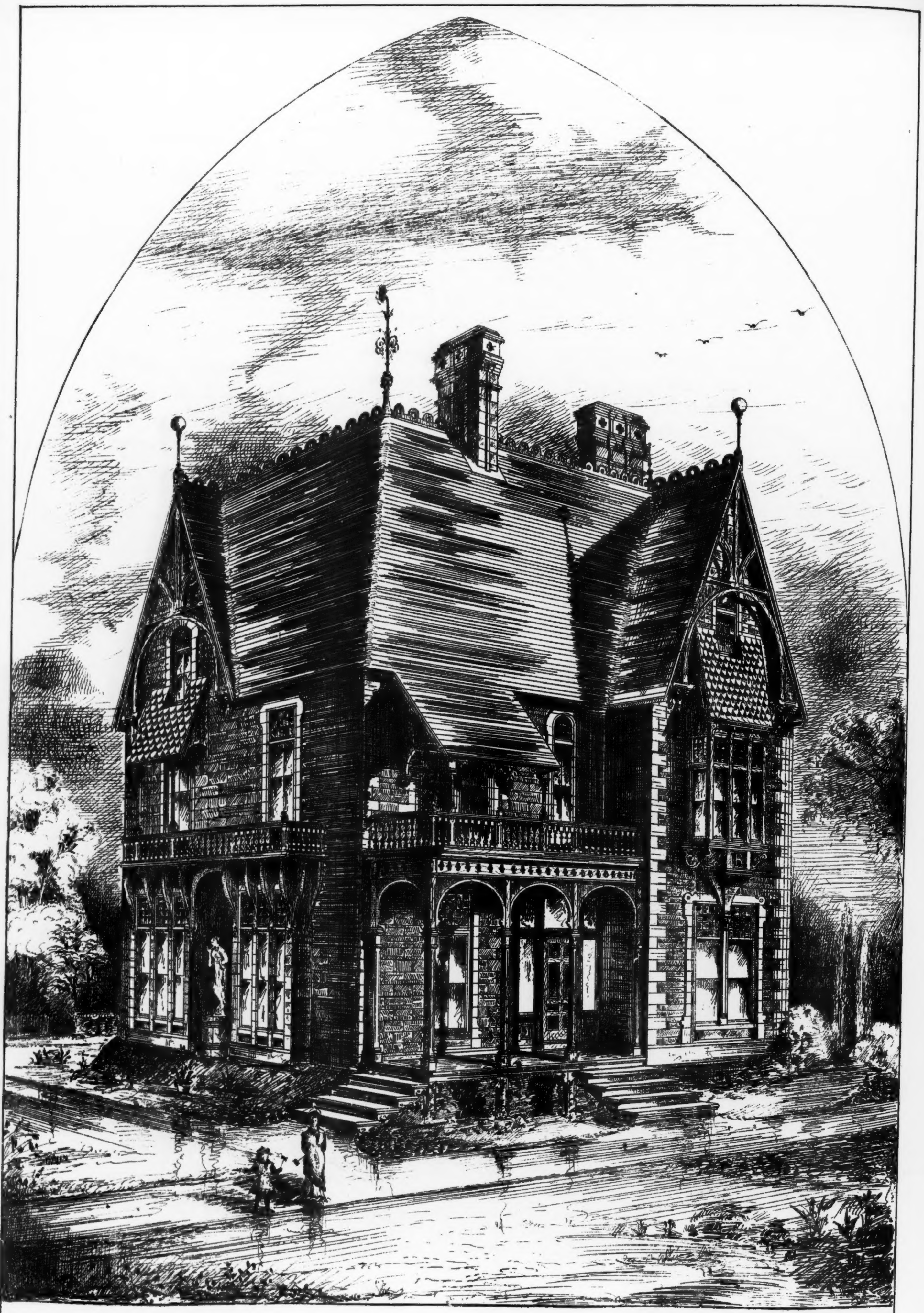
WOOD AND STONE RESIDENCE, NOVA SCOTIA.


PORCH
BACKSTAIR
KITCHEN
14 × 12
SINK
CHINA CLOSET
PANTRY
DRAWING ROOM
14·6 × 12
DINING ROOM
16 × 14
HALL
9·0
HALL STOVE
PARLOUR
14·6 × 12
VESTIBULE
LIBRARY
12 × 12
VERANDAH

GROUND FLOOR

Whiteman & Bass, Photo-Litho 236, High Holborn

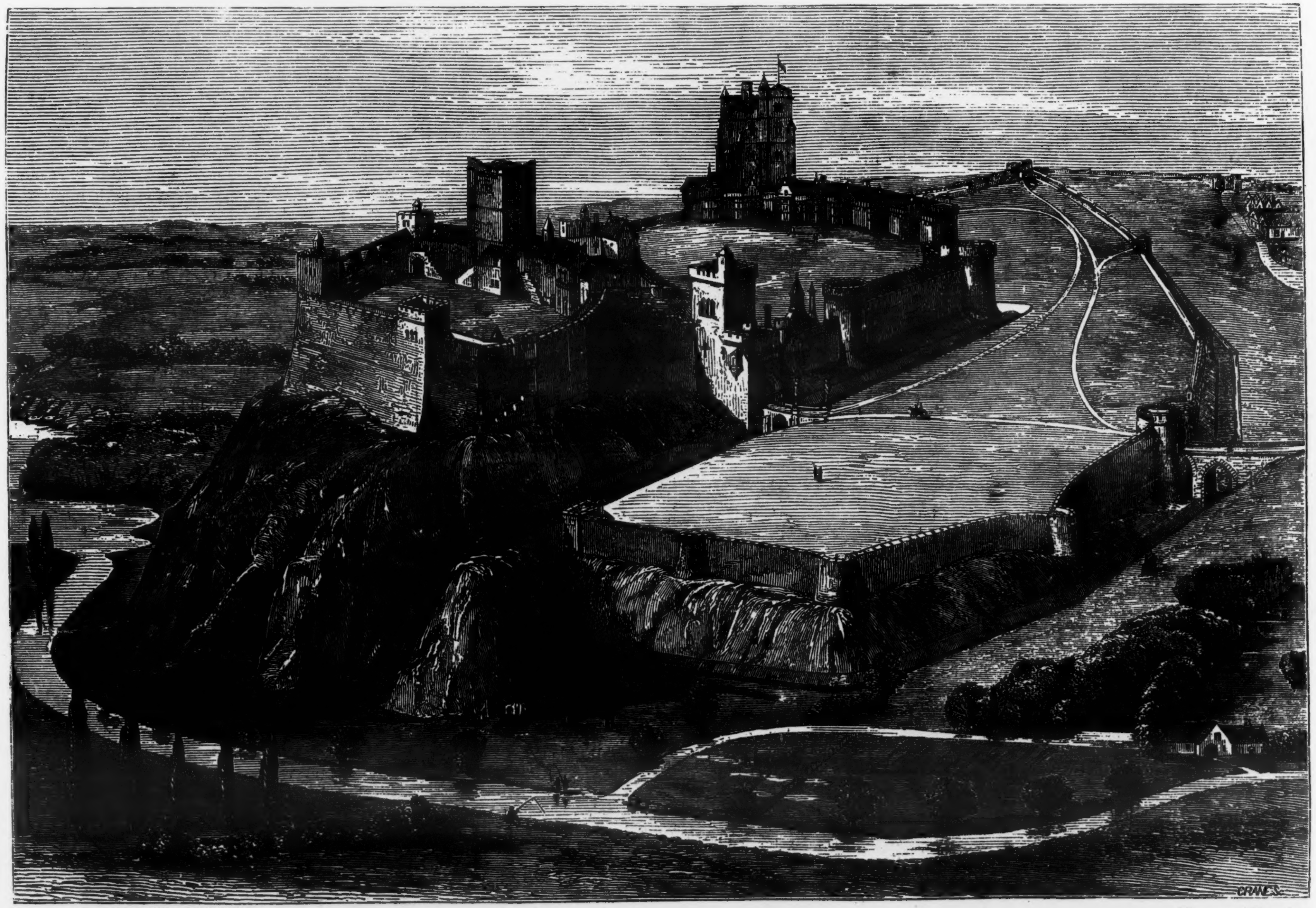
Wyman & Sons, Printers, Gt Queen St



STONE AND WOOD RESIDENCE, AMHERST, NOVA SCOTIA.—MR. ANDREW DEWAR, ARCHITECT.

Whiteman & Bass. *Photo-Litho* 236, High Holborn

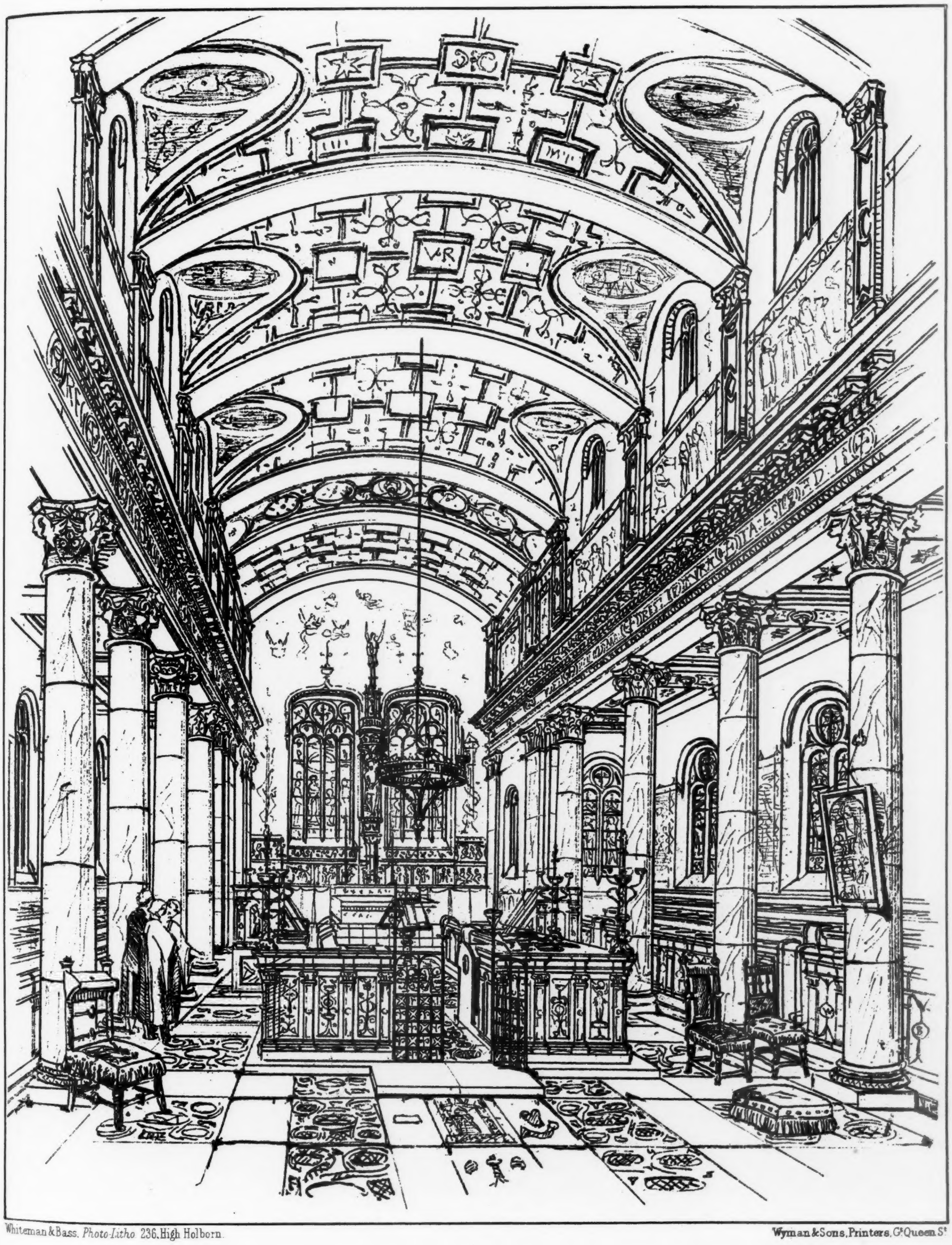
Wyman & Sons, Printers, Gt Queen St



Whiteman & Bass, *Photo-Litho.* 236. High Holborn.

[See page 579, *ante*.

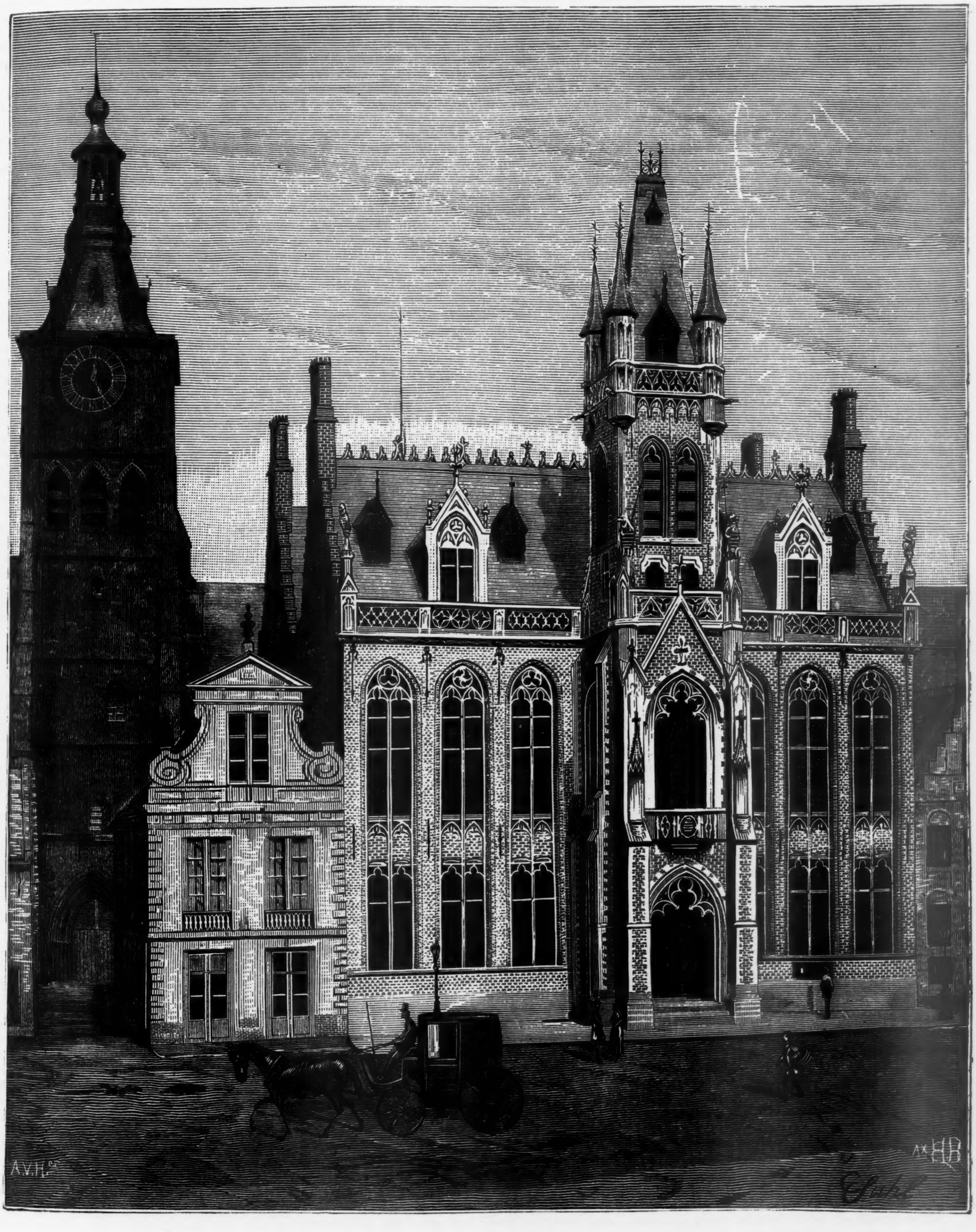
NOTTINGHAM CASTLE IN THE SIXTEENTH CENTURY.



Whiteman & Bass, *Photo-Litho* 236, High Holborn.

Wyman & Sons, Printers, Gt Queen St

FAC-SIMILE OF SKETCH DESIGN BY THE LATE MR. W. BURGES, A.R.A., FOR THE CHAPEL, KING'S COLLEGE, LONDON.



NEW HÔTEL DE VILLE, DIXMUDE, FLANDERS.—MR. DE LA CENSERIE, ARCHITECT.

NEW HÔTEL DE VILLE, AT DIXMUDE, FLANDERS.

As town-halls are the order of the day, every parish in London finding it necessary to have one, let alone every town in England, our readers may as well see the sort of building for this purpose which is being erected abroad. Dixmude is a small town in Western Flanders, on the river Yser, with a population of about 4,000 inhabitants. The parish church is noted for an elaborately-carved *jubé* rood, erected at the commencement of the sixteenth century, and a fine picture by Jordaens, "The Adoration of the Magi."

The architect of the new Town-hall is Mr. L. de la Censerie, and the inhabitants of Dixmude are quite proud of it.

THE LATE MR. W. BURGES, A.R.A.

WE illustrate our notice of this architect given last week with a *fac simile* of a design made by him for the chapel at King's College, London. It is interesting as not being in his usual style.[*] We append a portion of the letter from the architect which accompanied the sketch:—

"Enclosed you will find a sketch of the interior of the chapel. I have given it some attention, and decidedly think that the cast-iron columns of the room where the meetings are held should be removed, and stone ones substituted, and upon these should be placed those which are intended to support the clearstory. I should not like to trust to the iron ones, and still less to two sets of them. Consider if a fire should happen, and the wood casings of the pillars and the furniture should heat the said iron columns, Mr. Brathwaite (*sic*) comes with his engines, pumps upon them, they crack, and down comes the upper row, bringing with it all the clearstory. Indeed, I think it much the best construction to use stone, and you then know what you are dealing with.

As to the other parts, I had at one time an idea of using arches, but found they reduced the proportions of the chapel, and gave the clerestory an undue prominence. Now, in Gothic churches, where the total width is narrow, the whole height of the triforium and clearstory is often equal to and sometimes more than that of the pillars and arches, and the effect is often good for this reason, as I think,—the upper part, by reason of the narrowness of the nave, becomes foreshortened to the eye, the pillars and arches, being nearer to the spectator are less so, and thus a species of equilibrium is obtained. Now, in our present work the contrary of this would happen, as the nave is about 32 ft. I was, therefore, unwillingly obliged to give up the arches. Again, if arches were employed, they must spring from a pillar solely, as I should not have sufficient foundation to obtain a place whereon to place imposts, &c.

As to the choir, I thought that the type of St. Clemente, at Rome, would probably be the best under the circumstances. The Gospel and Epistle would be read from the two ambones, one of which would serve as a pulpit. The prayers could be read from a stall near the pulpit, and the lectern and a faldstool would complete the arrangement.

You will see by the plan that I propose putting the bulk of the students, *i. e.* the theologicals and the classicals, in three rows of stalls behind the pillars, the rest of the students would sit in the nave, part of which and the gallery could be appropriated to the *bellua* on Sundays.

You will also observe that I propose to build a sacrarium on the vacant space behind the chapel."

A NORMAN CASTLE.

THE CASTLE GARTH.[†]

THE keep, though the principal building in a Norman castle, was by no means the only one, nor that in most general use. To secure an impregnable retreat in extremity was well, but it was at least equally necessary to provide a space for the lodging of a garrison, for the storage of provisions,—which sometimes included live cattle,—and for the munitions and materials of war. A forge, a carpenter's shop, a garrison kitchen, a chapel, stables for horses, cart-sheds, piles of stones for missiles, all had to be considered, and although supplies of men and materials were seldom thought of till absolutely wanted, the space for them had to be provided in laying out the castle. Near the Welsh and Scottish borders, where the wars were always of a vindictive and personal character, and were as much directed against the cottage as the castle, space had also to be provided for the surrounding peasantry, and their flocks and herds. Hence, one of the first steps,—having selected a suitable site,—was to enclose it within a strong and safe fence, or curtain-wall.

In selecting a site, and setting out the plan of the fortress, the engineer was often governed by other circumstances than mere strength of defence, and not unfrequently the character of the position selected, also indicated the manner in which it was to be defended. For social or political reasons the castle was usually placed upon an older work, by which its figure and area, as well as its position, were much influenced. It was but seldom that, as in the Tower of London, or at Newcastle, or perhaps at Lancaster, the engineer had an absolutely free site to deal with. In such works as Lincoln, Tickhill, or Arundel, it was absolutely necessary to place the new wall upon or against the existing earthwork, and to turn to account the existing ditch. In such positions as Richmond, Pontefract, Knaresborough, Castleton, Clitheroe, or Durham, the engineer had equally no choice. The position, area, and plan of the work, were fixed by the character of the ground, and so at Hastings and Lewes. Sometimes it was convenient to place the castle within a Roman station, and it then became necessary to accommodate it to the existing walls, as at Porchester, Colchester, Pevensey, Chichester, and Chester. At Bristol the obvious site for the castle was on the low ground, between the marshy junction of the Frome and the Avon, and at Berkhampstead the position and figure were settled, not only by the previous earthworks, but by what had also led to their construction and plan, a natural knoll or platform rising out of marshy ground, and guarding one end of an important pass. Very frequently the castle was attached to a town or city, and intended at once to command and protect it. In such cases the castle formed a part of the defence of the place, but had proper walls and ditches of its own, and its main entrance was usually outside the town, as is well seen at Chepstow or in the gatehouse of the castle at Neath. Exeter is a good example of the relation between a castle and its town. Rougemont occupies one, the most elevated, angle of the general area. On two sides its wall and ditch are also the wall and ditch of the area, but both are continued round the castle itself so as completely to isolate it from the town. So, at Southampton, Winchester, Leicester, and the Tower of London, a portion of the town wall was the castle wall. At Chepstow there chanced to exist a lofty rock separated from the town by a natural ravine. Here, therefore, the castle is altogether outside the town, but even in this case cross walls from the town traversed the ravine at each end, and thus connected the defences of the two parts. Thus also at Carlisle, where the castle stands out boldly towards the quarter whence it was so often assailed, the promontory which it occupies is cut off from the city by a deep and broad ditch, across each end of which runs a wall connecting the one *enceinte* with the other, but allowing of no direct communication between them. In all such cases where the town wall abutted upon that of the castle great care was taken that there should be no way from one rampart to the other. Either the town wall was made lower than that of the castle, or a tower belonging to the latter covered the junction.

Having fixed the position, site, and figure of the area, the next step was to inclose it within a curtain-wall. This varied in height and strength according to the ground beyond it. Where there was a deep ditch and a high bank, and the wall was placed on the centre of the latter, a height of 12 ft. to 15 ft. was sufficient; more commonly, however, in such a case, the wall was built in part of and against the outside of the bank, so that its lower part became a revetment, and the bank formed a ramp or terrace within, as is well seen in Lincoln Castle. Where the defence was a natural cliff, as at Pontefract and Pembroke, the wall was also more or less of a revetment, capped only by a low parapet. Exeter, Helmsley, Tickhill, and Chester, afford examples of a wall built against a bank. At Warwick the buildings form a vast revetment built upon and against a sandstone cliff, so that the entrance from the court is upon the third stage counting from the river front. Sometimes, as in parts of York city, and probably at Hereford Castle, the wall was built upon the central line of the old bank, but the finest examples of Norman walls stand upon the solid and level ground, and have only their passive strength for their defence. Thus, at Cardiff, the wall which protected the most important ward is 11 ft. thick and 40 ft. high, and the ground-level the same inside and out; and at Corfe, a part of the wall of the outer ward is of equal dimensions. Where the curtain crosses the ditch there is often a small culvert or sluice-gate at the deepest part, as at Norham and Barnard Castle, or where the city wall crosses the castle ditch at Exeter. Where the wall was very thick the builders seem to have been careless about foundations. Thus, at Cardiff, when an angle of the wall was taken down to give room for a modern tower, it was discovered that there was no foundation at all, and that even a small heap of forge ashes which lay in the way had not been removed, but was included in the wall. The soil here is rough gravel. At York, in the formation of the new railway station, the city wall was cut through, with the bank on the centre of which it stood. The section showed traces of walls of different dates, one certainly Norman, but the foundations of all were within the substance of the bank, and very shallow; and in a part of Cardiff where the outer ward of the castle is contained within a very high and broad bank, a recent rebuilding of the wall along its centre showed little or no foundation. Here, however, the wall was thin, and of late date, so that it is possible that the original defence of the bank was a palisade, and that there never was any considerable wall or masonry. The absence of foundation, especially upon made ground, is the more remarkable because mines were much employed in early siege operations. There is also another method of foundation employed for curtain walls, the reason for which is obscure. The wall is built upon piers of masonry 5 ft. to 6 ft. square, and about 12 ft. apart, between which arches are turned, and the wall laid upon them. The masonry of the piers and arches is of the roughest description, and intended to be covered up with earth. A capital specimen of the kind of wall is seen in the curtain of Southampton Castle, where the bank has been removed, and the arcade stands out like a Roman aqueduct. There are similar arches in the walls of York, the tops of which, intended to be concealed, are just visible above the bank. There is a similar example at Norham. Of course such a wall, especially where, as in the examples cited, it stood within an artificial bank, was peculiarly favourable to the work of the miner. In all these cases the foundation is excellent; there is no weak ground to be avoided, and the saving in masonry was scarcely sufficient to explain why a solid wall was dispensed with.

The town wall of Southampton affords a perfect specimen of Norman work, and is at one point connected with the walls of a dwelling-house, also Norman; but the original wall was of no great thickness, and has been reinforced, also in the Norman period, by a second wall, or rather by a tall arcade built against its outer face,—a curious arrangement, and one affording great facilities for an attack by sheltering the miners. It is true that between the two walls is a sort of chase, down which pikes could be thrust, but this could easily have been stopped from below by a piece of timber, when the men would be quite out of reach. The older wall is pierced by windows and doors, partially closed by the latter work. All this looks as though the water, upon the edge of which the wall originally stood, was regarded as a sufficient defence, being too shallow for ships and too deep for an ordinary land attack. Part of the town wall of York is strengthened by an interior arcade, which carries the rampart walk. Another part of the wall seems to have had an internal scaffolding of timber supporting the rampart walk. Very often, where the Norman castle either did not admit of or did not require enlargement, the base of the curtain will be found to be original, though the superstructure may be later. This is well seen to be the case in the outer wall at Ludlow, at Kenilworth, and at Carlisle. Generally speaking, the older part of the curtain-walls of Norman castles seems older than the keep, the pressure for a general shelter being immediate.

Upon the curtain-wall were always a number of mural towers to give it strength, and to afford a flank defence, though flanking defences were not much trusted in by the Normans, in comparison with passive strength. These towers were usually square and as high as the curtains, and sometimes higher. They rarely have an internal projection. Usually they have a gorge wall,—that is, a wall closing the rear, but not always. At Ludlow and in the river ward of Porchester are square Norman towers open in the rear, like those of Cologne and Avignon. This was to prevent their being held against the garrison. They were closed with a brattice or screen of timber. Where mural towers rise above the curtain, they have a basement and two floors; the former usually at the ground level, and the floors were of timber. Sometimes, as at Ludlow, there is a small postern in the basement on one side of a tower. At Carlisle and Pontefract are small Norman posterns. The great tower at Oxford Castle seems to have been on the wall, and is of unusual size. At Kenilworth one angle of the outer ward is capped by a round tower of late Norman date and excellent workmanship. This tower has a fireplace and a stone staircase, but as a rule the Norman mural towers are seldom so provided, the stairs having been of timber. They often contain garderobes, and at the first floor communicated with the rampart of the curtain. There are good Norman mural towers at Dover, Wigmore, and Ludlow.

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[*] We are indebted to Mr. Nicolay for the use of the sketch.

[†] See for History of Keeps, pp. 283, 397, *ante*.

The ditch was an important feature in Norman defences, though where of great magnitude it is usually older than the masonry. Sometimes, as at Richmond, Scarborough, and Pontefract, the cliff rendered a ditch of less importance, though even there it is not wholly dispensed with. At Arques and Bramber, where the natural slope might render a ditch quite unnecessary, the ditches are very deep and broad, wholly artificial, and the counterscarp beyond the ditch is steeply pared and cut, so as to present a narrow ridge, beyond which the ground falls steeply. Such a ridge was, of course, strongly palisaded. At Berkhampstead, where the inner-ward wall takes the line of the edge of a low knoll of chalk, rising out of marshy ground, the ditch is not deep, but is repeated, and the intermediate ridges, far too narrow and slight to carry a wall, were evidently palisaded. At Windsor the ditches, now filled up, were deep and broad, and have been detected by probing the ground. There seem to have been two, concentric in plan, inclosing an oblong area, the mound being placed on one side of the area. The outer ditch is now covered at one part by the horseshoe cloister. Where the level permitted, the ditches were always filled with water, as at the Tower, York, and Berkhampstead. There are many reasons for supposing that the English fortresses, which must have been numerous and strong in the reigns of Edward the Elder and Æthelflaeda, had become neglected in the eleventh century, and the ditch and the glacis beyond it, two important parts of any fortification, had been allowed to be built upon. This will account for the great destruction of houses recorded in Domesday as attendant upon the establishment of a Norman castle, even where the area was only that of the existing works. Originally lands were held by the tenure of keeping the ditches clear, and this was probably the origin of the name "Fossard" (*Fossator*) which occurs in York and elsewhere.

The gate-house of a Norman castle was not, as a rule, so conspicuous a feature as in those of the Edwardian type. Frequently there was no proper gatehouse, and the entrance was by a gateway in the curtain. This seems to have been the case at Ogmore and at Cardiff, and in the inner wards of Bridgnorth and Kenilworth, in each of which a part of the doorway remains attached to the outside of the keep. In these castles the entrance was a mere doorway in the curtain close to, and abutting upon, but not communicating with, the keep. Each of these two had a portcullis, which, like the later one at Fisher Gate at York, must have been worked from, and when raised have risen above, the parapet.

The inner entrance of Ludlow Castle probably was a mere doorway, as at Newcastle-by-Bridgend, where the original late Norman opening remains perfect. Where there was a gate-house it was usually rectangular, about 20 ft. broad by 30 ft. deep, a mere shell of wall 4 ft. to 6 ft. thick, with an arch of 11 ft. or 12 ft. span in each end, and sometimes a third on a cross-wall in the middle. These arches are usually plain, without mouldings or chamfer, and not always even a rebate for the doors which were secured by a stout wooden bar. The portcullis is unusual, and there are no porter's lodges. There was an upper stage, with a floor of wood, of which material was also the stair. The whole basement was occupied by the passage. Usually the exterior projection was slight. Very frequently where the Norman gate-house has been preserved, the exterior arch has been masqued by a second or outer archway, usually of Decorated date, and containing a portcullis. Often also a well-stair has been added to give access to the upper floor. Tickhill, a plain and very perfect Norman gateway, has been thus masqued. At Porchester are two gate-houses inserted in the Roman wall, square shells, with an upper floor, and very plain archways, without even a rebate. Both have had Decorated additions, staircases, and outer doorways. One, the water-gate, has a sort of porch added, and the other has been vaulted and groined, but the substance of both is original. The inner ward of Porchester has also a plain gate-house, probably of late Norman date, with a Decorated front and portcullis. The City Bars at York have a Norman nucleus, a plain square building, with two arches and a wooden covering, the whole buried in a mass of Early English and Decorated masonry. Windsor had a fine Norman gateway, of which the base is preserved some feet below the later entrance, known as George IV.'s Gateway. The gate-house at Castle Rising is mostly original, as is that at Arundel, though with large exterior additions. At Arques, where the gate-house, though certainly Norman, has, as at Porchester, a very Roman aspect, is a cross-wall with a third and central gateway. The gatehouse at Sherborne Castle has an upper story, which, though altered, is original, and, what is very curious, the weather-table shows that the original roof was a tiled or shingle-covered lean-to against the front wall. The grandest extant example of a Norman gate-house is at the Episcopal Castle of Newark, where it is a very large and lofty building, a castle in itself, and ornamented in the Late Norman style.

Besides this, Norman entrances, more or less altered, remain at Shrewsbury and at Richmond. At Prudhoe is a small Norman gate-house, but the upper floor has been replaced by a later chapel. The entrance is original as it is at Bamborough, which, although unflanked and of slight exterior projection, is more ornate than usual, having lateral shafts and a recessed arch. The Decorated gate-house of the inner ward at Alnwick has a Norman entrance.

It is doubtful if there be a Norman barbican, though at Richmond the remains of the outwork covering the entrance and the keep has Norman work in its foundations. Pontefract has a very curious Late Norman postern connected with some extensive vaulted passages. The drawbridge was a regular appendage to a Norman gateway of any importance, but probably the arch at Cardiff leading to the keep, and lately laid open, is the only bridge of which any considerable portion is extant.

The Norman architects do not seem to have employed machicolated parapets from behind which missiles could be dropped on the foot of the wall, and there is no evidence, in England at least, of the use of hoards or parapets of wood, so common in the thirteenth century.

Strange stories are told of long subterranean passages from the interior of most ancient buildings, especially of castles and monastic houses. At Helmsley, the mouth of such a passage is shown, and an old map of Richmond shows the mouth of a tunnel passing under the river to the castle. Usually, where there are any such passages, they are evidently vaulted sewers; but where the castle stood upon soft rock, there do occasionally appear to have been passages, though only to enable the garrison to defend the ditches, or also probably as posterns. Thus at Arques are several galleries in the chalk rock opening on the scarp of the main ditch. At Windsor are two or perhaps three such passages, which pass from the inner ward in the chalk, right under the buildings of the castle, and formerly opened in the ditch. One of them has at its inner end the original Norman doorway. At Old Sarum was such a passage, also in the chalk, now closed up. There is also at Windsor, in the lower ward, another and much larger passage, suitable for cavalry, which opens upon the lower ditch near Windsor bridge. In its present form it is Early English, but it is certainly of earlier date, probably Norman, but possibly still older, for Windsor was an English stronghold, and, it may be, a British camp. The chalk rock at Dover is honeycombed with passages; unfortunately many of these were excavated in the last or early in the present century. They contain traps and other devices which could scarcely, under any circumstances, have been of use.

Of the buildings within the inner ward the principal was the hall with its appendages. The hall in the larger castles was a spacious chamber with an open roof and two aisles, usually with shafts or posts of timber, as in the much later Corporation Hall at York. At Adare Castle and at Christchurch, Hants, the hall stands on the banks of a river, into which its garderobe chamber is projected. These two halls were without aisles, which, however, are usually found in the larger buildings. Oakham is the most perfect Norman castle-hall in existence. The aisle-shafts are there of stone. The hall of Winchester Castle, still preserved, though on a Norman pattern, with aisles, is of Early English date. These halls were sometimes on the ground-floor, but more frequently rested upon a low basement, used as a cellar or store-chamber. The floor was usually of wood, the roof always. The hall was commonly placed between the kitchen and offices at one end, and the withdrawing-room and lodgings at the other. At Leicester, at one end, is a sort of vaulted cellar. Here, at Taunton, at Richmond, Christchurch, and Adare, the wall of the hall is, in fact, the curtain. At Oakham and Winchester the hall stood within the area, clear of the wall. In almost all cases the attendant buildings have been replaced as well as the hall itself. At Kenilworth the Norman kitchen seems to have been between the keep and the hall. At Berkeley both kitchen and cellar are original, of the reign of Henry III. The former is a hexagon, the latter vaulted and placed under the chapel.

Besides an oratory in the keep, there was always a chapel for the garrison in the inner or outer ward. This, however, has in almost every case been rebuilt, and the only evidence for it in most cases, is an occasional record of a sort of collegiate endowment. Bridgenorth, Pontefract, the Tower, Windsor, Arundel, and some other castles had collegiate chapels. At Richmond, besides a chapel near the hall, is a very curious Norman oratory within the ward-curtain. At Berkeley the chapel is near the hall, and is still in use, and both the chapel and an oratory there are mentioned in early records and in a Papal Bull. At Kenilworth the foundations of a large chapel of Decorated date have lately been laid open in the outer ward. At Dunster was a provision that, during a siege, the chapel service was to be carried on in the adjacent priory. At Pickering the chapel stood near the ditch of the keep. It has been rebuilt, but since desecrated. At Norwich it was outside the gates, and remains as St. Leonard's Church, as at Tutbury, where the fine old Priory Church, founded by the lords of the castle, was the castle chapel. At Leicester the grand and partly Norman church of St. Mary de Castro, and to Porchester the Priory Church, were both within the castle garth. In the middle ward of Ludlow still stands roofless the cylindrical nave of the castle chapel, the only castle chapel of that figure in England.

No doubt, the hall and domestic buildings, of whatever material they may have originally been constructed, were for the most part replaced in masonry before the conclusion of the Norman period, but there were a considerable number of inferior buildings, barracks for soldiers, sheds for horses and cattle during a siege, and sub-offices, which were hastily run up when needed, and at other times but little cared for. On the inner face of most castle walls, at 15 ft. to 20 ft. high, are continually seen lines of corbels, constructed to carry a wall-plate, upon which rested the rafters of lean-to buildings long since swept away. Sometimes fireplaces remain in the wall. Probably the sheds and barracks were the parts of castles that the pipe and close rolls show to have been always needing repair. A well-built keep, hall, or the lord's lodging would seldom need serious repairs, but wherever the Welsh or Scots were expected on the border, or from any quarter a district was exposed to be attacked, the records show that repairs were required. The royal revenue was too irregularly paid to allow of the fortresses being kept continually in repair, and even the larger castles were usually left to a single castle-keeper and half a dozen assistants. When the castles were wanted, but then only, the office of constable became active, stores were supplied, garrisons recruited, and such repairs ordered as were most urgently needed. Directly the danger was past the pressure was removed, and the buildings and defences were allowed to fall into decay.

Besides the well in the keep there was almost always one in the castle-yard, as may still be seen at Hedingham, Carlisle, Castle-Rising, Dover, Porchester, and Lincoln.

It has been supposed that the keep, as the most important part of a Norman fortress, was always the first built, and that the girdling walls and appendages were added, perhaps a generation later. This may sometimes have been the case, and was so, no doubt, at the Tower of London, where the need for a strong keep to overawe the citizens was very pressing; but the rule seems rather to have been the other way, and where the curtain-walls are preserved they are always as old, and not unfrequently older than the keep. At Ludlow, Corfe, and Richmond enough remains to show that this was so, and at Rochester, where, however, there was a keep of earlier date than the present one, unless, indeed, the tower of the south transept of the cathedral did duty for it. At Porchester the wall is Roman, but the outer gate-houses are earlier than the keep, and at Tamworth the wall is much earlier. Even where the wall has been rebuilt, as at Kenilworth, Carlisle, Alnwick, Prudhoe, Lincoln, Scarborough, Tickhill, and Wigmore, enough remains to show that the older work was at least as early, and probably earlier, than the keep. Probably where the keep stood on a mound, even though of timber, it was considered tolerably safe, and the outworks and more exposed parts, at first of timber, were thought most to require to be replaced in masonry. This, at least, may be asserted, that the keep, as a rule, did not stand alone, but was always accompanied by a base court. In many, probably in most cases, the original area of the fortress was found sufficient in later ages. Thus at Ludlow the area has certainly never been altered, nor at Kenilworth, Barnard Castle, Carlisle, Alnwick, Prudhoe, Lincoln, Scarborough, Tickhill, Knaresborough, Cardiff, or Wigmore. This is only true of the inner wards of Dover, Chepstow, Castleton and Corfe, outside which additions have been made, as in London. The whole circuit of the extensive area of Bamborough seems to rest upon a Norman foundation.

There are cases in which it is doubtful whether the Norman curtain ever contained any keep at all. Thus at Framlingham, a most important place, is a spacious inner ward with an unusually high curtain wall, but no trace of a keep. Exeter also, though it has a Norman gate-house and parts of a Norman mural tower, seems never to have had a keep. In both these cases the earthworks are of unusual strength, so that a keep may have been unnecessary. At Newcastle by Bridgend, where the gateway and much of the containing curtain is Norman, there is no trace of a keep, unless, indeed, the whole structure may be regarded as such. At St. Briavel's there seems to have been a Norman keep within the main area.

The extent to which the Norman builders took advantage of the earlier earthworks also varied. Sometimes, as at Kenilworth, Warwick, Pickering, Tickhill, Wallingford, and Oxford, they were all included in the new fortress, and walls built upon them. In other places, where the area would have been too large for the new lord, parts were excluded from the walled area and continued to be palisaded. Thus at Framlingham, of the three areas, two are walled in and one is simply enclosed. At Rochester, a great mound and other earthworks are excluded, but then these may be the remains of the Danish siege, and no part of the original defences, though unless the builder of the Norman castle intended to fortify and defend them they surely would have been levelled. At Cardiff, where the earthworks form three sides of a square, and where is a mound at the open end, that end and part of the adjacent sides are walled, and a cross wall built, which traversed the mound, and included about a third of it in the inner ward; the outer ward seems to have been left to be defended by its earthworks only. At Kilpeck also, and Castle Rising, are large outworks left unwalled, and in many other castles. No doubt all these outworks were palisaded and used to give shelter to the peasantry and their castle, or possibly at times to lodge a body of mercenaries who were distrusted, or for whom there was not accommodation within the walls.

Domesday mentions seven walled towns (Chester, Colchester, Leicester, Lincoln, Hereford, Oxford, and Stafford), and three (Canterbury, Nottingham, and York) as surrounded by a ditch. Of the walled towns the four first were Roman, and the Roman wall can even now be traced. Hereford was defended in some substantial fashion by Harold, and no doubt much earlier, as its earthworks bear, or did bear, witness. What remains of its Norman wall is late in that style. The line of the wall of Oxford is known, and parts of it remain, but they are probably later than Domesday. The wall of Stafford has long been removed, as has the Burh, thrown up by Æthelflæda. Canterbury ditch remains, with a fine internal bank, no doubt long pre-Norman, as is its curious Dane-John mound, and the other mound, also moated, traces of which are seen, or,—before the railways were constructed,—were seen, opposite Dane-John, and outside the ditch. The city, however, must have had at least a part of its area included within Roman walls, as at York, at the time of the Survey. Besides these were other towns known to have been walled long before the Conquest. Exeter was probably walled, or the walls repaired by Æthelstan, and Southampton and Wallingford were ditched; and Winchester, certainly, was both walled and ditched before Domesday.

Domesday, which omits the walls both of Exeter and York, no doubt passes over those of many other places. London, for example, had both wall and ditch, as had Chichester, and, probably, Warwick. The Roman wall of Gloucester, of which some half-buried fragments remain, was certainly far more perfect in the eleventh century, as must have been the wall of Horncastle; and walls imply gates, although gates often preceded walls, and were often of masonry, while the general defences of the town were only a ditch, bank, and palisade.

The annexed drawing, taken from the *Illustrated London News*, represents admirably in Nottingham in the sixteenth century, the appearance of a very perfect castle of the first-class. The Norman keep is seen on the curtain between two wards. The smaller or inner ward is original and Norman. It was enclosed in a lofty and strong curtain, following the outline of the rock on which it stood, and strengthened at its three most exposed angles by rectangular towers of no exterior projection. On two sides of the court were lodgings, and in the wall was a postern with exterior steps. The main gate of this ward was placed in the face next the tower, near the keep, and was covered by the middle ward. To the original castle was added, probably in the reign of John, or that of Henry III., a second or middle ward, having an entrance through the base of a square tower, so placed as to cover the least protected angle of the original castle. A square tower serving as a gate-house shows the arrangement was an early one, probably not later than the reign of John. This ward was contained within a strong curtain, with cylindrical mural towers of bold projection, and was so placed as to cover one side of the inner ward, and had its own ditch. Again, outside the two preceding wards, and applied so as to cover them on two sides, and the keep-ward on one side, was a large outer ward calculated to contain a small army. This ward was also walled with round bastion towers, that is, towers on the wall, but not rising above it. It also had two or probably three gate-houses, and a ditch. The utter destruction of so noble a remnant of early military architecture is much to be regretted.

The drawing shows the Trent and the castle mill, but not the two Burhs, mentioned in the Anglo-Saxon Chronicle as guarding the river; and which probably existed at that time.

G. T. C.

MELBOURNE EXHIBITION AWARDS.

The following awards, amongst others, have been published :—

PAPERHANGINGS.

First Order of Merit.—Fredk. Walton & Co., London, mural decorations; J. Allan & Son, London, paperhangings; William Cook, Great Britain, paperhangings; Darwen Paper Staining Company, Great Britain, paperhangings and wall decorations; Heywood, Higginbottom, Smith, & Co., Great Britain, paperhangings; Jeffrey & Co., Great Britain, paperhangings, embossed leather, and flock papers; C. & J. G. Potter, Great Britain, machine and hand printed paperhangings; W. Woollams & Co., Great Britain, paperhangings and embossed leather; Wylie & Lockhead, Glasgow, paperhangings and decorations; Scott, Cuthbertson, & Co., Great Britain, raised flock papers, &c.; Carlisle & Clegg, Great Britain, paperhangings; Flammersheim & Steinmann, Germany, paperhangings; G. F. Brackebush & Son, Germany, paperhangings; F. Follot, France, velvet borders and velvets (paperhangings); Gillou & Son, France, painted paper wall panels; J. Leroy & Sons, France, paperhangings; Spörlin & Zimmermann, Austria, tapestry wall decorations, tapestries, and coloured papers.

Second Order of Merit.—G. L. Pune, Germany, paperhangings and border decorations; A. Dessauer, Germany, fancy papers; M. Schlesinger, Germany, fancy papers; H. Schott, Germany, ornaments and labels in lithography and variegated printing.

Fourth Order of Merit.—Government Printing Office, Tokio, Japan, imitation of leather.

SCULPTURE.

First Order of Merit.—Commendatore Giulio Monteverde, Rome.

Second Order of Merit.—A. M. de Vasselot, Paris; C. Begas, Berlin; Marshall Wood, England; Luigi Pagani, Milan; Commendatore Edoardo Tabacchi, Turin.

Third Order of Merit.—L. E. Barrias, Paris; A. Itasse, Paris; N. H. Louis, Paris; M. Schulz, Berlin; T. Adams-Acton, London; A. Bruce Joy, London; Giovanni Cinicelli, Rome; Commendatore Guiseppe Dini, Turin; Antonio Gemignani, Naples; Professor Gerolamo Masini, Rome; Antonio Roseutti, Rome; A. Simonetti, Sydney; F. Hartzer, Berlin.

Fourth Order of Merit.—Charles Brunin, Mons, Belgium; E. Aizelin, Paris; D. W. Stevenson, Edinburgh; T. Woolner, R.A., London; Achille Albacini, Rome; Antonio Botinelli, Rome; Adaberto Ceucetti, Rome; Egisto Del Panta, Florence; P. D'Epinay, Rome; Camille Grilli, Rome; Joseph Kopf, Rome; Francesco Mariotti, Carrara; Paolo Ricci, Florence; Charles Summers, Rome; John Udney, Carrara; A. Weizenberg, Rome; A. Bagalini, Kapunda, South Australia.

BRONZES.

First Order of Merit.—F. Martin, Paris; Christofle & Co., Paris; H. Barbedienne, Paris; R. Bichweiler, Hamburg; Czarnikow & Busch, Berlin; Count Stolberg-Wernigerode Factory, Ilsenberg, Germany; G. B. Dupre, Florence; M. Marunaka, Kanazawa, Japan.

Second Order of Merit.—E. G. Zimmerman, Hanau, Germany; De Poli Bros., Vittoria, Italy; J. Cambos, Paris; J. Laumans, Laeken, near Brussels; F. Von Miller, Munich.

Third Order of Merit.—Victor Tilgner, Vienna; Madame Leon Bertaux, Paris; A. D. Doublemard, Paris; Blot and Drouard, Paris; A. Emery, Paris; E. Gay Lamaille & Co., Paris; Journet & Co., Paris; E. Lohse, Paris; Mercery, jun., & C. Jussy, Paris; Company for the Manufacture of Bronzes, Berlin; C. Kramme, Berlin; G. B. Algostino & Sons, Turin; Constantino Calvi, Rome; Cavaliere A. Nelli, Rome; K. Koshokuwaisha & T. Akiyama, Tokio, Japan; Z. Saito, Tokio; Sanseisha, Tokio; Kirin, Koshokuwaisha, Tokio.

Fourth Order of Merit.—F. A. Bartholdi, Paris; E. Delaplanche, Paris; P. Brocot, Paris; Jenkens, sen., & Co., Paris; H. Richardin, Paris; Koch & Bein, Berlin; A. Waagen & Co., Berlin; Prof. Commendatore E. Pazzi, Florence; A. Tognozzi-Morein, Florence; Pasquale Arquati, Venice; C. de Luca & Son, Naples; Michel Angelo Guggenheim, Venice; Roberto Lorenzetti, Pistoja, Italy; Y. Shoami, Okayama, Japan.

Fifth Order of Merit.—A. Cattier, Brussels; D. Ruigel, Paris; Avoiron & Clement, Paris; Rollin Domange, Paris; A. Durenne, Paris; Hubault & Breuillard, Paris; Angelo Giordani, Venice; Oscar Meyer, Florence; Don G. Palmieri, Venice.

CAMEOS, DIE-SINKING, AND ENGRAVING ON METAL, GLASS, SEALS, GEMS, &C.

First Order of Merit.—American Watch Company, Waltham, Mass.; George Bissinger, France; Joint Exhibition of Engravers, Berlin; T. Webb & Sons, Stourbridge.

Second Order of Merit.—Francati & Santamaria, Rome.

Third Order of Merit.—R. Schneider, Berlin; Cavaliere Constantino Calvi, Rome; Cavalieri Luigi Oliviero, Venice; Sands & M'Dougall, Melbourne.

Fourth Order of Merit.—F. Ciapponi, Rome; P. Siotto, Rome; R. Petrucci, Naples.

Fifth Order of Merit.—Harry Stane, London; A. De Caro, Venice; E. A. Altmann, Melbourne; G. Twentyman; Windsor; E. Whitehead & Co., Melbourne.

REPOUSSE.

Fourth Order of Merit.—Lala Natta Ram, India.

Fifth Order of Merit.—Lala Seva Ram, India.

MISCELLANEOUS.

First Order of Merit.—Cavaliere G. B. Gatti, wood-carving, Rome; Societa Musiva Veneziana, mosaics, Venice; Societa Venezia Murano, mosaics, Venice; Luigi Tarantoni, mosaics, Rome; Soyer, enamels, France; J. A. & A. A. Turpe, enamels, Dresden; Lauchhammer Factory, metal-work, Lauchhammer, Germany; A. Boulenger & Co., plated-ware, Paris: and with Special Mention, electype reproductions of the royal plate, Department of Science and Art, South Kensington Museum.

Second Order of Merit.—Testolini Brothers, mosaics, Venice; Marriotti & Fantoni, mosaics, Florence; J. R. Rowland, enamelling, Melbourne; Lund, inlaid ivory, Germany; Société des Hauts Fourneaus du Val D'Osne, metal castings, Paris.

Third Order of Merit.—Z. J. Jackel, wood-carvings, Spitz-on-the-Danube; F. Unterberger, wood-carvings, Innspruk, Tyrol; Besarel-Panciera, wood carvings, Venice; Marco Del Tedesco, wood-carvings, Venice; M. Guggenheim, wood-carvings, Venice; Francesca Somasco, wood-carvings, Rome; Innocente Cattaneo, wood-carvings, Milan; Giocondo Torrini, mosaics, Florence; P. Comain, terra-cotta, Brussels; Bedendo, mosaics, Venice; A. Falcini, mosaics, Florence; Kusat Din & Shaif Din, enamels, India; Golam Kossein, inlaid table, India; A. Lauter, metal-castings, Carlsruhe, Germany; J. Rogers, modelling, terra-cotta, New York; Quellinus School, terra-cotta, Amsterdam.

Fourth Order of Merit.—T. F. Borgfeldt, carvings in cork, Berlin; G. Lang's heirs, wood-carvings, Oberammergau, Germany; Evaristo Panducci, wood-carvings, Florence; L. J. Godfrey, wood-carvings, Dunedin; Giovanni Boucinelli & Sons, wood-carvings, Florence; Louis Ludwig, terra-cotta, Brussels; Mayer's Artistic Establishment, religious statuary, Munich; A. Meves, metal castings, Berlin; Schafer & Hauschner, metal castings, Berlin; Pietro Tin, metal castings, Venice.

Fifth Order of Merit.—G. B. de Lotto, wood-carving, Venice; Francesco Morini, wood-carving, Florence; Gesuati Orfanotrofio, wood-carving, Venice; J. Flueck, wood-carving, Brienz, Switzerland; A. Civita, mosaics, Florence; Oscar Meyer, mosaics, Florence; A. Sandrini, mosaics, Florence; C. Wiener, terra-cotta, Brussels; F. X. Reitzler, religious statuary, Munich; Salvatore Valenti, terra-cotta, Palermo; A. Arens, stamped copper plates, Antwerp; Hottot, zincwork, Paris; Rauvier, zincwork, Paris; J. Vincent, zincwork, Paris; B. Zalaffi, ironwork, Siena.

FILTERS.

First Order of Merit.—R. T. Adams, Victoria, Dahlke's improved patent silicated carbon filter; G. Cheavin, England, rapid water-filters; A. G. Middleton, Victoria, dripstone filter; Timperley Bros., Victoria, improved water-filters.

Second Order of Merit.—J. G. Holt, Victoria, pure carbon filter; A. G. Middleton, Victoria, carbon and dripstone compo. filter; Silicated Carbon Filter Company, England, silicated carbon filters.

MISCELLANEOUS.

First Order of Merit.—W. & T. Avery, England, assay and chemical balances; Doulton & Watts, England, stoneware chemical apparatus; M. Flurscheim, Germany, pharmaceutists' mills and presses; T. Fevre, France, seltzogenes; H. Maldine, France, seltzogenes; Ed.

Robert, France, feeding-bottles; A. Ziemann, German vacuum apparatus.

Honourable Mention.—C. Molinier & Co., England, machine for tanning.

GLASSWARE AND POTTERY.

JURY.—C. M. Rosenthal (chairman), P. A. Agnew, George Foord, F. G. Cunningham, V. Delves-Broughton, John Fulton, C. Schoessler, J. B. Crews.

POTTERY.—*First Order of Merit.*—Collective Exhibit of the Chamber of Commerce of Limoges, France; Minton & Co., Minton, England; Worcester Royal Factory, Worcester, England; Moor Bros., Longton, England; Villeroy & Boch, Mettlach, Germany; Brown, Westhead, Moore, & Co., Stoke-upon-Trent, England. *Second Order of Merit.*—Haas & Czyezek, Schlaggenwald, Austria; Huart Bros., Longwy, France; J. Houry, Paris; F. X. Thallmeier, Munich, Germany; L. Wessel, Bonn am Rhine, Germany; Ens. Triebner & Eckert, Volkstedt, Germany; Josiah Wedgwood & Son, Etruria, England; W. Brownfield & Sons, Cobridge, England; T. Akiyama, Tokio, Japan. *Third Order of Merit.*—Boch & Co., La Louviere, Belgium; L. Hutschenreuther, Selb, Germany; C. Tielsch & Co., Altwasser, Germany; D. M'Birney & Co., Fermanagh, Ireland; Powell, Bishop, & Co., Hanley, England; K. Miyagawa, Yokohama; F. Monier, Foecy, France; Bourdon & Robert, Paris; C. G. Guthrie, Sandhurst. *Fourth Order of Merit.*—L. Nolan, Melbourne; M. Marunaka, Kanazawa, Japan; Pinder, Bourne, & Co., England; R. Hanke, Hohr, near Coblenz; Hope & Carter, England; H. Lonitz, Neuhaldensleben, Germany. *Fifth Order of Merit.*—Laporte & Moussott Bros., Limoges; Barluett, France; Hiochlyen, Tokio, Japan; Kirio Kosho Kuwaisha, Tokio, Japan; Koransha, Yokohama; Cundliffe, Canterbury, N.Z.; Austin, Kirk, & Co., Christchurch; Wilson & Ridge, Melbourne; Baldock Bros., Camperdown, N.S.W. *Highly Commended.*—Bengal Sub-committee, Bengal.

ARTISTIC POTTERY.—*First Order of Merit:* Manufactory of Sèvres, Sèvres; Meissen Royal Porcelain Factory, Meissen, Germany; Ginori Manufatturo, Doocia, Italy; Fayanceorie de Gien, Paris; H. Doulton & Co., London; Bernardo Mazzarelli, Naples. *Second Order of Merit:* Josef Zache, Vienna; W. Zaolnay, Funfkirchen, Austria; D. Vion, Paris; Merkelbach & Wick, Grenzhausen, Germany; A. Farina & Son, Faenza, Italy; A. Giustianani, Naples. *Third Order of Merit:* Radler & Pilz, Vienna; C. Falb, Vienna; Helene Wolfsohn, Dresden; R. Bichweiler, Hamburg; G. Bataglia, Naples; C. Tanfani, Rome. *Fourth Order of Merit:* T. Palagi, Florence; Tafet Torelli, Florence; Commendatore B. Ardy, Turin. *Fifth Order of Merit:* Penilliar, Paris.

GLASSWARE.

PLAIN, ENGRAVED, CUT, ETCHED, AND ORNAMENTAL.—*First Order of Merit.*—Thos. Webb & Son, Stourbridge, England; Count Harrach, Neuwelt, Austria. *Second Order of Merit.*—Hermann Müller, Ullrichsthal, Austria; Franz Wagness, Meisteradorf, Austria; J. Schreiber & Neyshews, Vienna; Boulton & Mills, Stourbridge, England; Cavaliere M. Candiani, Venice; L. Rady, Murano, Italy. *Third Order of Merit.*—C. Drobnik & Co., Haidur, Austria; T. Mühlhaus & Co., Haitre, Austria; Cristelleries du Val, St. Lambert, Belgium; E. Breffit & Co., London; T. Ford & Co., Edinburgh; Sykes M'Voy, Castleford, England; Villeroy & Bock, Mettlach, Germany; Woodroffe, Glassblowers, Melbourne; Society of Tempered Glass and Crystal, Paris. *Fourth Order of Merit.*—Hegenbowth Heirs, Haide, Bohemia; F. Pellmi, Köng & Co., Steinchonan, Austria; Landier & Houdeille, Paris; Kilner Brothers, London; Melbourne Glass Bottle Works, Melbourne; Fouracre & Watson, Plymouth; Australian Glass Manufacturing Company, Limited, Melbourne; Hobbs, Brockunier, & Co., Wheeling, W.V., U.S.A. *Fifth Order of Merit.*—C. Mellzer & Co., Langenan, Bohemia; S. Reich & Co., Vienna; H. Ullrich, Vienna; C. Barnard & Co., Boyneaux, France; H. F. Stender, Gross Rhuden, Germany; S. Floyd, Melbourne.

WINDOW GLASS AND MIRRORS.—*First Order of Merit.*—Société de Glacé de St. Gobain, St. Gobain, France: H. Y. Bivort, Jumet, Belgium; L. Bandoux & Co., Charleroi, Belgium; Chance Bros. & Co., Birmingham; Royal Dutch Bent and Ground Glass Works, Dortrecht, Holland. *Second Order of Merit.*—L. Mondron, Lodelinsart, Belgium; Société Anonyme des Verreries Nationales, Jumet, Belgium; C. L. Hildebrand, Hamburg, Germany; Brooks, Robinson, & Co., Melbourne; Fourcoult, Frison, & Co., Dampremy, Belgium. *Third Order of Merit.*—Agence Générale de Vente des Glaceries, Brussels; Société Anonyme des Verreries de Charleroi, Lodelinsart, Belgium; A. Bends, Paris. *Fourth Order of Merit.*—Schmidt, Devillez, & Co., Dampremy, Belgium; Verreries des Hamendes, Jumet, Belgium; Verreries de Mariemont, Mariemont, Belgium; Chamouillet, Paris; Carstens, Germany. *Fifth Order of Merit.*—A. Morel, Lodelinsart, Belgium; Pittman & Son, London; J. Bell, Melbourne.

PAINTED WINDOWS.—*First Order of Merit.*—K. L. Turcke, Zittan, Germany; Lorin, Paris. *Second Order of Merit.*—F. X. Zetler, Munich; Mayer's Artistic Establishment, Munich.

TILES.—*First Order of Merit.*—Minton, Hollins, & Co.; Stoke-upon-Trent. *Second Order of Merit.*—Campbell Brick and Tile Company, Stoke-upon-Trent; Maw & Co., Shropshire. *Third Order of Merit.*—Australian Tile Works, Malvern; C. O. Fison, Stowmarket. *Fourth Order of Merit.*—Snizig Manufactory of Mosaic Tiles and Clayware, Snizig, Germany; Craven, Dunnill, & Co., Shropshire; J. O. Croze, Vittorio, Italy.

STONEWARE DRAIN PIPES, &c.—*First Order of Merit.*—Doulton & Company, London.

STONEWARE FOR CHEMICAL PURPOSES.—*First Order of Merit.*—Doulton & Watts, London; the Hoffman Patent Steam Brick Company, Melbourne, bricks, &c. *Second Order of Merit.*—James Dunnachi, Glasgow, Glenboig Star fire bricks; Harper & Morres, Stourbridge, England; G. Jennings, London; C. K. Harrison, Stourbridge, England. *Third Order of Merit.*—Farnley Iron Company, Farnley, England, enamelled bricks. *Fourth Order of Merit.*—Joseph Hamblet, West Bromwich, England, bricks, &c.; South Australian Brick Company, Brompton, South Australia; A. Cornwell, Melbourne.

VENETIAN GLASS.—*First Order of Merit.*—Compagnia Venezia Murano, Venice. *Third Order of Merit.*—R. Bichweller, Hamburg.

SPUN GLASS.—*Third Order of Merit.*—Md. de Brunfant, Vienna; Tommasi & Gelsomini, Venice.

A very large number of awards in the furniture, upholstery, and carpet classes, have also been published; but it cannot be said that they are of a satisfactory character, being too indiscriminate and too numerous, European firms of long-established standing being grouped with colonial firms of moderate pretensions. This may be very gratifying to the vanity of Australian manufacturers, but it will hardly tend to increase the value of the awards in the estimation of those resident outside the Colonies. The Sydney awards were more judicious, despite the large amount of favouritism evinced. For instance, the furniture of Messrs. Arrowsmith & Co., at Sydney, was honoured with several first-class awards, including one special; at Melbourne it is simply grouped together for an ordinary first-class award, an honour shared by a considerable number of exhibits not possessing a tithe of its artistic character or merit. It has been finally decided that medals are to be given only in the case of first-class awards, and that no exhibitor shall receive more than one medal.

THE ROYAL ACADEMY:

PROSPECTIVE WORK.

SIR FREDERICK LEIGHTON, presiding at the Royal Academy Banquet on Saturday last, in responding to the toast of his health (proposed by the Lord Chancellor), said,—When last I had the honour to respond for this toast I expressed the hope that it might this year be in my power to make known to you the result, in brief summary at least, of our labours in the revision and extension of our scheme of education. In that hope I am not deceived, and I will, with your permission, bring before you some of the salient points on which that scheme has been either modified or enlarged. Now, the Royal Academy has, throughout its deliberations, had before it certain clear aims and certain definite principles. It is sought to add to the means of study brought within the reach of the students of this country, and it has further sought to add incentives to their zeal by a discriminating increase of the prizes offered within our walls; but it has also determined to take measures for the exercise of a vigilant control over the labours of those students, with the object of satisfying itself that the advantages provided for them are not squandered or thrown away,—keeping constantly in view the fundamental fact that it is the function of an academy to foster art, not to multiply artists; its duty to check as well as to encourage, to prune as well as to graft; to see that opportunity is used as well as offered, and that the idle or the inapt do not cumber the floor of schools meant for the gifted and the industrious. It has, therefore, been resolved to hold at the close of the first three years of studentship an examination, the result of which shall in each case determine whether that studentship is bearing fruit and shall be prolonged, or is barren and shall cease. Further, the full term of studentship has been reduced from seven years to six, a period sufficient, in our view, for the acquirement of whatever can be imparted in a school. By the side of these wholesome provisions for the control of the student we place materially increased facilities of study; and, first, we supply a long-deplored want by the institution of a separate school for modelling, under a special curator, controlled in his turn, as is our system, by members of the Academy. The institution of such a school seems, indeed, a necessity so self-evident that it may be well here to say its foundation had been decided on in principle a considerable number of years ago,—as soon, in fact, as our increased floor-space made it possible. Its practical formation, however, was made contingent on an undertaking to use it being made by a very limited number of students. That undertaking was, to our mortification, not forthcoming, and the scheme lapsed. I am thankful to think that a different spirit is now manifest. Sculpture is shaking off its sleep, and striving for a new day of life. It is therefore with a strong trust and with brightened hopes that we once more come forward to aid the study of that lofty art. Nor have we forgotten the close bonds which exist between sculpture and architecture, and the great advantage to the architect of acquiring the power of handling clay. Accordingly, instruction will be provided for young architects in the practical modelling of ornament as applied to architecture; and indeed the sisterhood, not of these two only, but of all three arts, is acknowledged by the access offered to each and all of the schools, whatever their special character. But whilst we have enlarged the area and scope of our teaching we have provided also new incentives to industry and new acknowledgments of its results in the shape of prizes, and in so doing we have sought to steer a mean course between insufficient and, what is not less to be deprecated, excessive recompenses. It will suffice, on this occasion, to instance three or four cases in which we have either added to existing or created new prizes. We have increased in a considerable measure the rewards offered to the study of the human form from the living model,—a study which lies at the root of all high artistic excellence and achievements. Again, a prize, not indeed considerable in amount, and to be viewed rather as an encouragement than as a remuneration, is offered for the reproduction of a study from the life in line-engraving, a delightful branch of art in which this country once held conspicuous rank and furnished famous names, but which now struggles with scant success to exist. Due homage, again, is done both to the prominent place occupied in modern art by landscape, and to the memory of a supreme artist by the addition of a scholarship to that prize to which is attached the name, and which we owe to the generosity of the greatest of English landscape painters,—Turner. But among the prizes which are of new creation, there is none which I have a deeper satisfaction in announcing to you than that which comes in aid of mural painting. Prizes existed already through the large liberality of one of our members,—Mr. Armitage,—for the designs in monochrome of figure pictures of an imaginative or historic character; prizes founded with a view to cultivating the practice of composition and developing a sense of style. A prize will now be given by the Academy for a production in which the additional problem shall have been solved of adapting a design to a given and definite space for the decoration of a portion of a public building; and, seeing that painting on wall surfaces is an art having technical conditions of its own, it will follow still farther the student who shall produce a design worthy of being put into execution, and will enable him by a modest pecuniary subvention to carry it out on the spot for which it was designed, and so practically acquaint himself with the manipulation of a form of art in which many of the greatest artists of past days have reached their highest flights, and built up their most lasting fame. But in instituting this prize, which has in its bearings my deepest sympathy, and for the efficient working of which I shall spare no personal effort, the Academy must not be understood to trench on the province of those public bodies or private persons through whom alone this most noble form of art can be effectually fostered. This would be a misapprehension of its sphere of duty. Its duty to the student is co-extensive with its power to instruct him; and if it for a moment assumes the semblance of a patron, it is only that it may, by a special process of training, preserve for art and hand down to coming generations a previous heritage of great traditions. The Academy does not forget that the grace of talent and the crown of genius are not in the giving of human hands, but it remembers also that if it cannot implant the powers that stamp the artist, it can arouse them, strengthen them, and arm them with knowledge. This is its duty and its appointed work. This you may claim of it, and herein I pledge it not to fail.

ST. JOHN'S ROMAN CATHOLIC CHURCH, GRAVESEND.

THIS edifice has now been restored, after the disastrous fire which occurred in it on New Year's Day, and the opportunity has been taken to erect two windows in stained glass, which replace those formerly filled with blue and yellow panes. The new windows are of two lights each, and are on each side of the apse, in which is placed the high altar, representing in the left-hand window St. Edward the Confessor and St. John the Evangelist, the patron saint of the church. The figures in the right-hand window are St. Joseph and St. Michael. The church has also been decorated throughout, the chancel and side chapels especially including in the design six seraphim, with musical instruments, praising God, and being nearly life-size. The builder was Mr. Blake, of Gravesend, while the stained-glass windows and the decorations have been carried out by Messrs. Worrall & Co., of Endell-street, London.

MANCHESTER SCHOOL OF ART.

The New School of Art for Manchester, situate in Cavendish-street, All Saints', was formally opened by the Earl of Derby on the 27th ult. The necessity for obtaining premises better suited for teaching purposes, and capable of healthily accommodating a larger number of students, had been for years felt, and action in this direction was expedited by the Council of the Royal Institution intimating their desire to occupy the premises held by the school for the purposes of their own exhibitions, &c. After much consideration (says the *Manchester Courier*), the site in Cavendish-street, containing about 3,000 square yards net building land, was purchased in 1876 for 10,500*l.*, and a hope was entertained at the time, part of which is now happily carried out, that on this site, having an admirable north light, which cannot be interfered with, not only a School of Art, but also a Public Art Gallery might be erected. The Manchester School of Design, out of which the present School of Art may fairly be said to have sprung, was established in 1838, following upon a series of lectures delivered by Mr. Geo. Jackson, a local decorator, and Mr. B. R. Haydon, the artist, the aim of its promoters being to impart instruction in drawing, the use of colour, perspective, geometry, modelling, and in pattern-drawing for calico printing and weaving; also, to give lectures on painting, sculpture, anatomy, zoology, botany, &c., and the formation of a museum of casts, models, paintings, designs, and a library of books and engravings. Though this was the design with which the school was started, it may be mentioned that no steps have been taken to carry the latter part of the project into execution. The School of Design was established in the Royal Institution; it then migrated to Brown-street, but afterwards to the Institution, where it has remained ever since. The number of pupils on the books in 1844 appears to have been 141; in 1850, 352; and in 1880, 377. Having reached the maximum of accommodation, the number could not, naturally, increase beyond the capacity of the building, which would only afford room for an active list of about 220 students. The income of the school has been derived partly from local subscriptions, partly from students' fees, and partly from assistance by Government. The local subscriptions have averaged from 260*l.* to 300*l.* per annum. The students' fees were, in 1843, 54*l.*; in 1844, 165*l.*; in 1850, 327*l*; and in 1880, 932*l.*

The school at present possesses the following endowments:—Sir J. Whitworth, shares in the Whitworth Land Company, for general school purposes, 1,000*l.*; Mrs. Elizabeth Heywood, for the Goadsby Prizes, value 20*l.* annually, 500*l.* John Thompson, F.R.S., dies of the Primrose Gold Medal, designed by Gibson, and executed by W. Wyon, R.A., 250*l.*; ditto, endowment (the income accumulates till a gold medal can be given), 50*l.*; total 300*l.* Representatives of Thomas Barge,—endowment of the Barge Prize Fund, 150*l.*

The new buildings have been erected, from the designs and under the superintendence of Mr. G. T. Redmayne, architect, at a total cost of about 24,000*l.*, towards which the committee have succeeded in procuring donations to the amount of 17,000*l.*, and a hope is expressed that the efforts which they have made, and which have been so nobly seconded by the people of Manchester, will be crowned with success, and the institution "placed rent free in its own freehold premises."

SALE OF A BUILDING ESTATE AT WOOD-GREEN.

Last week Messrs. Fox & Bousfield submitted for sale, at the Auction Mart, a quantity of freehold building land, being a portion of the Chitt's-hill estate, situate at Wood-green, in the parish of Tottenham, close to the Bowes Park and Wood-green station of the Great Northern Railway, and within a few minutes' walk of the Green-lanes station of the Great Eastern Railway. The property offered was described as comprising between eight and nine acres of picturesque land, adorned with ornamental shrubberies and handsome trees. It was stated to have a frontage of 250 ft. to the high road from London to Enfield. The auctioneer stated that he considered the frontage was worth 10*l.* a foot, but he thought the lowest value they could put upon the land as a whole was 1,000*l.* an acre, which would amount to between 8,000*l.* and 9,000*l.* The first bid was 5,000*l.*, and 6,300*l.* having been reached, the auctioneer observed that although the sum offered was much below its value, it was now an open sale. An advance to 6,500*l.* having been made, it was sold for that sum.

TO WORKING PLUMBERS.

Under the direction of the National Health Society, a course of six practical lectures, specially addressed to working plumbers, and illustrated by examples, diagrams, and working models, and demonstrations on "The Science and Art of Sanitary Plumbing," will be given by Mr. S. Stevens Hellyer, author of "The Plumber and Sanitary Houses," at the rooms of the Society of Arts, John-street, Adelphi, on the following dates,—May 17th; June 1st, 14th, and 28th; July 12th and 28th; to commence each evening at half-past seven. The following is a syllabus of the course:—

May 17. *Introductory.*—Unsanitary Plumbing. Force of Prejudice. Importance of Knowledge of Principles. Who should call themselves Plumbers? Need of a School of Plumbing.

June 1. *Joints and Pipe-bending.*—Wiped Soldered Joints:—Underhand, Upright, Branch, Block, Flange, Taft. Copper-bit Joints:—Float, Ribbon, Overcast, Blow-pipe Joints, Pipe Bending.

June 14. *Traps and Trap-Ventilation.*—The necessity of Traps proved by practical experiments. Traps which form themselves into collecting-boxes or cesspools. Self-cleansing Traps. Trap syphonage. Trap ventilation.

June 28. *House Drainage and Ventilation.* Soil Pipes. General Waste Pipes. Cistern Wastes. Safe Wastes. Connexions of Branch-Pipes with Main Pipes, &c. Value of good Water-flushing, &c.

July 12. *House Drainage and Ventilation.*—Disconnexion of Soil-pipes and Waste-pipes from Drains, and of Drains from Sewers and Cesspools. Ventilation of Soil-pipes, Waste-pipes and Drains. Summing up.

July 28.—*The Art of Lead-Laying.*

These Lectures will be illustrated by practical experiments and large diagrams.

After the close of this course of lectures, examinations will be held of a practical nature, including working tests. Two large silver medals, several smaller silver and bronze medals, will be awarded by the National Health Society for superior merit; and certificates of proficiency will be awarded to all working plumbers who show their competency.

Free tickets may be obtained on application to the Secretary, Miss Lankester, 44, Berners-street; or at the Office of this Journal, 46, Catherine-street.

EXTENSIVE SALE OF WEST END, CITY, AND OTHER PROPERTIES.

An unusually large sale of freehold and leasehold properties at the West End and other parts of the metropolis took place at the Auction Mart last week. The sale, which was conducted by Mr. G. A. Wilkinson, of Bucklersbury, took place under the will of the late Mr. Allen Lewis, and embraced several valuable freeholds and leaseholds, producing an aggregate rental of 3,230*l.* per annum. The property was offered in twenty lots, and drew together a very numerous company, the sale occupying between two and three hours. The West End property included a leasehold shop and dwelling-house in Regent-street, held for an unexpired term of thirty-eight years, at a ground-rent of 93*l.* 10s. per annum, and let on lease at 450*l.* per annum, which sold for 4,760*l.* A leasehold dwelling-house in Beak-street, Regent-street, held from the Crown for an unexpired term of forty years, at a ground-rent of 21*l.* 10s. per annum, and let on lease at 140*l.* per annum, realised 1,670*l.* Another leasehold dwelling-house in the same street, held from the Crown for an unexpired term of thirty-one years, at a ground-rent of 50*l.* per annum, and let on lease at 152*l.* per annum, was sold for 1,300*l.* Two leasehold properties in Piccadilly commanded a high price. One of them comprised a shop and dwelling-house, 46, Piccadilly, at the corner of Albany Court-yard, held for an unexpired term of twenty years, at a ground-rent of 70*l.* per annum, and let on lease at 320*l.* per annum, which sold for 4,040*l.* Another leasehold shop and dwelling-house in Piccadilly, also held for an unexpired term of twenty years, at a ground-rent of 70*l.* per annum, and let on lease at 300*l.* per annum, was sold for 3,430*l.* The City property comprised two valuable lots. One consisted of three warehouses in Queen-street, Cheapside, and Maiden-lane, in the rear, let on leases at an aggregate rental of 890*l.* per annum, the property being held on lease for an unexpired term of eleven years, at ground-rents amounting to 276*l.* per annum, leaving a profit rental of 614*l.* per annum. The lot realised 3,500*l.* A freehold warehouse in Queenhithe, Upper Thames-street, let on lease, at a rental of 100*l.* per annum, was sold for 2,250*l.* A freehold property, known as the Waterloo Iron Foundry, Grange-lane, Bermondsey, covering a large area, with several buildings upon it, for foundry purposes, and let on lease at 120*l.* per annum, was sold for 2,250*l.* The other property consisted of several freehold and leasehold houses, shops, and warehouses in Bermondsey, Westminster, the Borough, and Clapham, all of which were sold for an aggregate sum of 2,575*l.* The entire proceeds of the day's sale amounted to 25,775*l.*

SALE OF FREEHOLD LAND AND BUILDINGS IN LINCOLN'S INN FIELDS.

A freehold property on the south side of Lincoln's-inn-fields, in close proximity to the New Law Courts, was submitted for sale at the Auction Mart on Tuesday, by Messrs. Debenham, Tewson, & Co. The property consists of two separate buildings, connected by a covered way, and has frontages of about 33 ft. to Lincoln's-inn-fields, and 37 ft. to Portugal-street, the entire depth being about 144 ft., and the total ground area 4,840 superficial feet, exclusive of the forecourt in Lincoln's-inn-fields, containing an area of about 1,200 ft. The main building, facing Lincoln's-inn-fields, was described as a substantial structure, containing four floors and a basement, arranged in suites of large offices and chambers. Between the back premises, facing Portugal-street, and the main building there is a large open yard, containing an area of abeut 1,000 ft. The first offer made for the property was 10,000*l.*, and it was ultimately sold for 12,600*l.*

MISCONCEPTION REGARDING THE THEORY OF COLOUR.

Sir,—Both of your correspondents on the subject of colour, in your last week's issue, appear by their letters to be totally insensible to the fundamental principle of the received theory of colour, viz., that there are no colours in the external world; that colours are but the phenomena of sense,—sensations. Now, nothing can be effected towards a better understanding of the subject till this part is thoroughly understood. For instance, what can well exhibit, in words, more crass obliviousness to that important truth than the following passages, quoted from the letter of R. W. S., "inclining a paper on which two or more colours have been placed" "causes the differently coloured rays to intermingle before reaching the eye." Now, knowing as we do, that colour exists in sense only, it must be clear that two or more colours can never be placed upon a paper, nor can there be two differently coloured rays before reaching the eyes. I might refer to other passages in his letter, but will pass on to point out the same curious misconception in Mr. J. D. Crace's communication, wherein, speaking of Mr. Standage's paper, he says, "He places the two colours at right angles to each other, with their edges in contact at the angle;" "let him place his colours, as M. Chevreul directs, on the same plane," &c. Moreover, Mr. Crace does not even perceive that the modern theory of vibrations, and of the physiological theory of the harmony of colour, preclude the nomenclature of primaries and secondaries, which are a figment of an extinct world of thought. When shall we get writers upon colour to write as if they really understood the primary principles of the matter?

W. C. T.

Richmond Exhibition.—In the industrial section are a series of architectural and engineering drawings, the work of F. J. Bancroft, South Kensington student, and one of the three selected candidates, from a total of fifty-five competitors, for junior assistant to the Hackney Board of Works, and now working under Mr. Berry Clarke, the highway surveyor to the Islington Vestry. They consist of the following:—Road and sewer construction, occupation bridge over railway, timber roof trusses, and church gates and railings. He also shows a good collection of timbers used in building construction, all catalogued with their botanical names, weights per cubic foot, &c.

PATENT RECORD.*

APPLICATIONS FOR LETTERS PATENT.

1,671. G. H. Flood, Campden-hill, and D. Young, Southampton Buildings. Apparatus for regulating the flow of liquids. April 16, 1881.

1,677. J. Hunter, Towlaw. Coke ovens, April 16, 1881.

1,680. A. Tyson, Ulverston. Conservatories. April 16, 1881.

1,682. L. Wall, Islington. Apparatus for regulating the supply of water to water-closets, &c. April 16, 1881.

1,690. W. G. Sloane & J. Sloane, Dublin. Apparatus for heating and ventilating Turkish baths. April 19, 1881.

1,714. C. R. Stevens, Lewisham. Apparatus for heating and cooking by gaseous, liquid, or solid fuel. April 20, 1881.

1,719. D. Thompson & W. H. Thompson, Leeds. Bending, burning, staining, &c., glass, tiles, and pottery. April 20, 1881.

1,727. R. Lavender, Pontypool. Compound applicable for castings and cement. April 20, 1881.

NOTICES TO PROCEED

have been given by the following applicants on the dates named.

April 19, 1881.

5,212. B. Banks, Leeds. Ashpans for fireplaces. Dec. 13, 1880.

5,220. J. R. Pickard, Leeds. Fire-grates. Dec. 13, 1880.

5,308. J. Wiley, Darlaston. Clips for gutter-spouting. Dec. 18, 1880.

5,365. A. M. Clarke, Chancery-lane. Basic fire-bricks, &c. (Com. by J. B. M. P. Closson, Paris.) Dec. 21, 1880.

3. E Bull, Halifax. Floor-springs for closing doors, &c. Jan. 1, 1881.

April 22, 1881.

5,057. J. F. Hoyne, Water-lane. Regulating the passage of air or other gases through outlets and inlets. Dec. 4, 1880.

5,303. T. Rowan, Ryde. Ventilating sewers and drains. Dec. 17, 1880.

5,306. T. H. Goodson, Berlin. Automatic apparatus for preventing waste of water in water-closets. (Com. by H. E. T. Goodson, Berlin.) Dec. 17, 1880.

5,408. E. E. Street, Clifton. Kilns for burning bricks. Dec. 23, 1880.

5,424. H. Johnson and B. Suart, Keymer Junction. Pressing and moulding bricks, tiles, &c. Dec. 24, 1880.

5,439. H. Payton, Birmingham, and W. S. Dackus, Balsall-heath. Attaching door-knobs, &c., to their spindles. Dec. 24, 1880.

5,457. B. J. B. Mills, Southampton-buildings. A blow-pipe revolving furnace for the manufacture of iron, steel, building, and paving blocks, &c. (Com. by G. Duryee, New York, U.S.A.) Dec. 28, 1880.

5,505. H. Lancaster, Pendleton. Steam-traps. Dec. 31, 1880.

15. W. Dover, Liverpool. Elevators. Jan. 3, 1881.

54. H. Lancaster, Pendleton. Lever steam-traps. Jan. 5, 1881.

557. J. Davidson, Aberdeen. Draw-off taps of kitchen boilers. Feb. 9, 1881.

ABRIDGMENTS OF SPECIFICATIONS

***Published during the Week ending April* 23, 1881.**

3,498. H. W. Perrers, Hampstead. Iron grills for protecting shop-fronts, &c.

In the level of the stall-plate and under the stall-board is constructed an inclined drawer, within which the grill slides when not in use. The grill consists of parts hinged together like a carpenter's rule, which, when required, is drawn out of the drawer and turned up before the shop-front, and then fastened to eyes in the sash-bars. Aug. 28, 1880. Price 6d.

3,530. F. Hart, Queen Victoria-street. Steam heating apparatus.

The tubes for heating a room, &c., are placed parallel between two upright chambers, which have nipples fitted to receive the tubes. Round each nipple is placed a tapering indiarubber ring. The tubes being placed over these, the chambers are drawn together by long bolts passed through them. Perfectly steam-tight joints are thus made. Aug. 31, 1880. Price 6d.

3,627. C. H. Murray, Southwark. Machinery for making bricks.

The first part is an improvement on Patent No. 1581, of 1866. After the clay comes out of the mouth of the moulding machine, and is cut into lengths, it is carried over rollers to the table to be cut into bricks. These rollers, instead of being carried on bearings rigidly connected to the table, are mounted on brackets hinged to the table, so that they can easily be turned up or swung out of the way. The second part is an improvement on Patent No. 336, of 1871, which describes the making of a brick with an ornamental moulding. Two templates are used, one or both of which may be mounted on guides, and when the clay is placed between them they are moved towards each other, and the brick formed between them. Sept. 7, 1880. Price 6d.

3,639. J. Woodward, Manchester. Valves for gas and other fluids.

The valve is a disc with a perfect face, and has a stem at the back. The stem is jointed to an arm, secured on a shaft which carries the handle. This arm has an eccentric or cam surface formed on it, which forces the disc firmly against its facing, and gives it a slight sliding movement, which cleans the facing at the same time. (*Pro. Pro.*) Sept. 8, 1880. Price 2d.

3,700. W. Lea, Wolverhampton. Sash-fasteners.

The lever for holding the two sashes together is formed in two parts, jointed together. When the lever is turned over to connect the two sashes, the hinged part turns up to pass over an inclined projection, and then drops down again beyond the end of the same, and thus prevents the sash being opened from the outside. (*Pro. Pro.*) Sept. 11, 1880. Price 2d.

3,839. R. M. Ritchie, Edinburgh. Apparatus for heating drying-closets, ovens, buildings, &c.

A series of metallic tubes are used, partially filled with water, and hermetically sealed. The lower ends rest or are suspended in a furnace. The action of the heat causes the water in the lower portion of the tube to rise, as steam, to the upper part, where it is condensed, and thus a constant circulation is kept up. Sept. 22, 1880. Price 6d.

THE CHURCH OF ST. DOMINIC'S PRIORY, HAVERSTOCK HILL.

Sir,—During the many years in which I have practised the profession so congenial to my tastes, I have invariably met with kindness, courtesy, and consideration from my brother architects, and was therefore surprised on my attention being called to an unprovoked and ill-natured attack upon myself, and upon the structure of the Dominican Priory Church, Southampton-road, Haverstock-hill, in the last number of a review entitled the *Sacristy*, edited by Messrs. Walford & Scott.

The article is penned with bitterness, and with the view to depreciate the building and its architect, and is beyond the range of fair and honest criticism. Invidious complaints had formerly been made, by a secret foe, at the office of the district surveyor of St. Pancras, and the sequel explains those proceedings. The careful and able report made by Mr. Wallen, the district surveyor, in March last, completely refuted the false and disparaging statements as to the stability of the fabric, and I am glad of the opportunity to place it on record, as it also disposes of the myths and phantoms which emanate from the *Sacristy*.

> "Considering all the circumstances of this case, the approval of the original plans by my predecessor, the length of time during which the main structure had been in progress, and the excellent character of the work and materials, I was and am of opinion that no further interference or requisition was called for, but that the question of the stability of the building, with all responsibility for it, should be left with the eminent architect who was the author of its design.
>
> There could be no doubt in my mind, however, that some very slight movement at least would result from the settlement of the joints of the roof-principals upon the bolts and straps which had been inserted and fixed.
>
> I made, on the 15th instant, a careful examination of the building, in company with its architect.
>
> It is singularly free from any settlement in the brickwork of the main walls and arches. Two very slight settlements only appear in the transverse arches, not recent, and apparently resulting from unequal loading of the spandrels when the works were suspended prior to 1878.
>
> The main piers supporting the nave arcade, which are of cut stone, and cylindrical in form, are bedded in putty, with sheets of lead laid therein, the jointing of the beds being very wide. I could discover no fracture of any of these beds either in the stone or in the putty. The height of them, however, was in some cases unequal, evidently resulting from unequal pressure on the putty when it was wet, or unequal spreading of it at the time the stones were set.
>
> On plumbing the main piers I found a very slight inclination in some cases towards the nave, the extreme case being an inclination of ¾ in. in a height of 18 ft. There was also in some cases a similar inclination in the direction of the length of the church, which tends to confirm the view that the inclination as well as the inequality of the beds is the result of the original setting, and not of any subsequent movement.
>
> The clearstory inclines outwards on the north side, at about the middle of the length of the church, to the extent of ¾ in. in a height of 6 ft., and near the apse ⅞ in. in the same height. On the south side it is practically upright.
>
> The inclination is less than I should have expected during the inevitable settlement of an arched timber roof, well constructed, of this design.
>
> I have already stated that the design is a bold one, but I do not consider it unsafe. I do not think any movement has taken place since the completion of the fabric, and certainly none that would call for the intervention of the authorities, at present, at least.
>
> I should recommend the architect (to whom I have sent a copy of this report, and with whom all responsibility should be left) to watch and plumb the building carefully and periodically for some time, but I do not consider this a case for the exercise of the powers contained in the Acts referred to at the head of this report, and I beg to certify accordingly.
>
> (Signed) Frederick Wallen,
> District Surveyor for West St. Pancras,
> 106, Gower-street, W.C."

The hostile criticisms in the *Sacristy* are evidently not those of one who has studied the plans of old Dominican churches, wherein, as at Winchelsea, Antwerp, and Louvain, there is usually no structural chancel, nor a processional way round the apse of the choir, as in cathedral churches and the larger minsters. The friars did not despise brick and slate, and some of the most renowned churches of the order, in Italy and Belgium are of brick.

It is unfair and impossible to judge of the effect of the interior while it is encumbered with scaffolding, and until the funds (about 300*l.*) admit of the sculpture of the shapeless masses and blocks of stone into foliated capitals and pendants, when the columns will appear in their true proportions. They are sound and perfect throughout, not a joint flushed, nor a flaw perceptible in the superincumbent arches and the arcades of the clearstory; the thrust of the transverse arches of the aisles is nullified by the vertical pressure, and the equilibrium of the whole is true,—"bold, but not unsafe." The roof accords with the style of the architecture, the wall-posts and curved ribs of the main principals descending to stone capitals, which range with the springing line of the clearstory-windows, diminishing the lateral thrust on the upper part of the walls. The internal arched boarding, and transverse and diagonal ribs in each bay, are similar to the roof of the grand Dominican church in Ghent, now unhappily destroyed. The window in the principal front bears likeness to that in the same church, while the "uninteresting" two-light windows in the apse resemble those of the exquisitely beautiful church of the Dominicans at Louvain.

The original design for a stone gallery, as at Florence, Valognes, and elsewhere, on corbels, with pierced parapet and coping, was found impracticable on account of expense, poverty having proved oppressive from the first, and the aim always having been to obtain as much as possible for as little as possible; but the design, if accomplished, is not likely to have suited the morose taste of the *Sacristy*. For the substitution of the iron gallery, and for the border of red and blue in the temporary glazing, I am not responsible.

The *Sacristy* has studiously suppressed the name of the "designer," and it excites a smile when it is gravely asserted that he "can scarcely have seen, or at any rate have measured, an original Mediæval moulding." In the preface to Mr. J. H. Parker's "Domestic Architecture," published in 1853, mention is made of the Buckler collection of drawings and sketches, "the result of the labours of three generations." Since that date the collection, then unrivalled, has been greatly augmented, and it abounds in measured details from ancient examples of ecclesiastical, military, and domestic architecture.

"En tibi læta damus, lætum quæ reddere possint.
  Læta igitur læta perlege fronte rogo.
Ludicris Buclere meis sis optime scutum,
  Et formidabunt livida tela nihil."

Charles Alban Buckler.

Sir,—In reference to the hostile criticism upon the new Dominican Church found in the first number of the *Sacristy*, a periodical edited by Messrs. E. Walford and G. Gilbert Scott, allow me to say that the alleged facts in the said article are palpably untrue; so, therefore, are the conclusions drawn from those facts.

Edward A. Williams.

St. Dominic's Priory, Haverstock-hill.

THE WEST FRONT, ST. ALBAN'S ABBEY.

Sir,—Now that the acceptance of the builder's tender for the new west front has been actually announced, it may not be considered wrong to ask whether good drawings of the old front are in existence. None have been published since Carter's book (1813). Neale's book (1878) did not illustrate the west front. Of course, the drawings that we want are not merely the sketches with which an architect might be contented who was meditating the sweeping away of the existing work. Exhaustive drawings, of minute, even slavish accuracy, would be welcomed by many who have read of the doom of this interesting piece of our old national architecture with bitter regret.

A Lover of Saint Alban's.

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* Compiled by Hart & Co., patent agents, 28, New Bridge-street, E.C.

STANDLAKE CHURCH, OXON.

The parish church of the Holy Cross at Standlake, an Oxfordshire village, situated some four miles from Witney, was re-opened on Easter Sunday, after part restoration by the Venerable Archdeacon of Oxford. The renovation of the whole building is in contemplation by the present rector, the Rev. L. S. Tackwell, but, with the intention that all may be done in the best possible manner, the work has been subdivided into sections, in order that it may the better be carried out thoroughly well. That the welfare of the congregation should be, in the first instance, cared for, the nave received primary consideration, and that portion having been taken in hand, is the part just completed. Standlake Church is an interesting old cruciform building, consisting of chancel, nave, north and south aisles and transepts, south porch, and western tower. The earliest part of the edifice is twelfth-century work, and work of different periods up to the fifteenth century exist. The old post-Reformation pews have been cleared out, and the unsightly modern roof has followed suit. The clearstory walls have been rebuilt, and a new and very handsome roof of massive English oak has been erected over the nave. It rests upon carved wall-plates, and is enriched by life-sized hammer-beam full-length angels. These bear shields, upon which are emblazoned the emblems of the Passion. The font is of Bath stone, well moulded, and having a band of early foliage around its circular bowl. The arcades have been restored where necessary. The seating is all of oak. The nave alley is laid with encaustic tiles, and the floors under the seating is of oak blocks, placed in herring-bone pattern.

The unique feature in the nave bench-ends is the series of sculptured figures thereon. They represent the calendar of the Church,—this being it is stated, the first time since the Reformation that such a thing, in like manner, has been introduced into any Established Church in England. According to ancient usage, the virgin saints are placed upon the north side, and the male ones upon the south. They all turn, more or less, towards the east; and each one rests upon the splayed base of its respective bench-end. The name of each saint occurs upon a scroll. The carvings are all full-length figures, and represent,—The Blessed Virgin uncrowned and with the lily; St. Mary Magdalen with the alabaster pot,—the panel having a shield in its first quarter, bearing the arms of the Magdalen College, Oxford, whose gift the Standlake living is; St. Faith, semi-nude and resting upon the brazen bed on which she suffered martyrdom; St. Etheldreda arrayed as an abbess with crozier turned inwards, the crown and sceptre she wore as queen thrown on one side; St. Cecilia with the hand-organ; St. Katharine crowned, in ermined robes, standing by the wheel and bearing a long sword; St. Lucy offering up her eyes upon a scollop-shell, her neck transfixed by the fatal sword; St. Prisca holding a sword,—the lion crouched at her feet; St. Agnes and the lamb; St. Agatha with the pincers; St. Margaret and the dragon; St. Anne teaching the blessed Virgin as a child to read; St. Perpetua taking farewell of her infant prior to martyrdom; St. Elizabeth; St. Veronica holding out the miraculous napkin with the impression of the suffering Saviour's head thereon; and lastly, of the Virgins, St. Frideswide. Tradition associates this saint with the immediate neighbourhood of Standlake. Upon the opposite side is St. John the Baptist, hairy-robed, and bearing knife and pilgrim's staff; St. Stephen, in deacon's orders, with stone and martyr's palm; St. Ambrose, as bishop, with flageollette and crosier, and bee-hive at his feet; St. Augustine the Great, in early bishop's robes; St. Lawrence as a martyred deacon with the money-bag and gridiron; the Venerable Bede with book, upon which is an impression of the ring found upon his finger after death; St. George on horseback, slaughtering the dragon; St. Gregory the Great, in full pontifical robes, with triple tiara and staff, bearing his homilies, a dove whispering inspiration into his ear the while; St. Benedict in the habit of the order he founded; St. Ignatius, as bishop, chained, and with a lion tearing him to pieces; his friend, St. Polycarp, calmly bearing death by fire; St. Swithun, as Bishop of Winchester, the diocesan arms upon a shield by his head, the woman's basket of eggs at his feet; St. Giles and the Fawn, St. Paul with the sword, and St. Martin in martial dress parting his cloak with the supplicant beggar. The bench-ends facing the arcades are carved with foliated Early English raised crosses.

The pulpit stands upon the north side, and has a moulded and slightly-carved base of Portland stone. The upper part is of English oak, massive in construction. Its cants are free from mouldings, the sculpture therein being deeply cut into the solid wood. On the side cants are carved figures of the four Evangelists. In the central panel are the symbolical emblems of the Evangelists, carved deeply into the oak. The general effect is procured wholly by plain surfaces, contrasted by good figure carving. This pulpit is a memorial one to the late Mr. Walter Strickland, of Cokethorpe Park.

The contractors for the works just completed are Messrs. Barnes & Son, of Witney. The sculpture and the wood and stone carving are by Mr. Harry Hems, of Exeter; and the whole restoration has been carried out from the designs and under the supervision of Mr. Clapton C. Rolfe, of Tilehurst, Reading, architect. The cost of the nave restoration has been about 2,000*l.*

THE NATURAL HISTORY MUSEUM, CROMWELL-ROAD.

Sir,—Your correspondent, "A Naturalist," seems to me to have missed his way somehow or other in what was meant to be a damaging criticism of the New Natural History Museum. He starts with a utilitarian idea, and claims your attention on that behalf, and then wanders far and wide in a field which he seems to be little acquainted with,—the architectural features of this vast and magnificent pile. It matters little to the architect, I should say, whether the arrangement of the specimens gave Professor Huxley a headache when he inspected the stuffed birds' gallery, or whether the montonous repetition of similar-looking birds perched in identical rows is tiresome to the public. The proper authorities settle the arrangement of the specimens, and the form and position of the cases; the architect designs the galleries to contain them, and follows as closely as he can the instructions given him.

"A Naturalist" would have been much nearer the mark had he said that on entering we find ourselves in what appears to be a very beautiful and elaborately-decorated Romanesque hall. The mind must be imaginative indeed that sees in the Typical Museum the likeness of a Norman cathedral, but the wild creation of "A Naturalist's" mind carries us farther than this, as he speaks also of the "railway construction" of a part of this ecclesiastical building. A Norman cathedral is generally a building with a prodigiously long nave, and fairly lofty proportions, with windows of small dimensions, a flat ceiling, and termination eastward in the form of a semicircular apse. A dozen of these rush to one's memory, and, Sir, as I walked into the Typical Museum on Saturday last, I could trace but one resemblance,—the unlucky architect has had the misfortune to use semicircular arches. If he had used pointed ones, he would have been out of all patience ecclesiastical; and if he had used Classic columns and entablatures, "A Naturalist" would have entered what would have appeared to be a pagan temple. "A Naturalist," however, for a second time assures the public that the Typical Museum is generally cathedral-like, &c., and that it is little less than desecration to intrude anything with less repose than Mediæval effigies, or Chantrey and Canova tombs; but I think, Sir, that it is eminently fit to receive the great monuments of nature, and "for the likes of them" it has been laboriously and specially designed. Nor do I think that the richness of the work is out of place. The student cares little about the housing of the specimens so that it is done well and efficiently, and the objects of his study are placed conveniently for his inspection; but if the outside public, who make a visit to such a place a sort of holiday, were to go into a set of bare galleries, with repulsive walls of plaster and paint, and windows that, whatever attraction they might have, could certainly never have been guilty of intrusion upon the sacred masonry of a Norman cathedral, they would naturally pass round in a sort of solemn procession, and pass out again to enjoy the sunshine, having done their duty to natural history, and not having studied a single example, because there was no attraction about the place.

But the people I saw there on Saturday did nothing of the kind; they passed into the Typical Museum, and having duly given their umbrella to the attendant, passed in to enjoy the architectural treat before them. There were no specimens, so they might study the building without reproach; then being convinced that it was grand and satisfactory, they went on to the gallery adjoining; another brief look round, and then their attention was fixed upon the specimens, and the general hum of conversation showed plainly that they were interested. My observation was that the architecture was not very much studied, although, here and there, a couple, perhaps, satiated with the contents of the galleries, sauntered into the Typical Museum, and remarked on the detail, which seems to have even a special interest to the Naturalist. On the whole, the objection seems to be entirely sentimental. The lighting, ventilating, and warming are good; the cases stand in convenient places; access to the different galleries is easy; and, contrary to "A Naturalist," I think that the proportions are suitable; and that rich terra-cotta work is a distinct advantage, because it draws the interest of the public, and renders a visit to the Museum the pleasure it should be. The profit will depend upon the intelligence of the individual. It would be appropriate to enlarge upon the dignity of the magnificent collection, and the greatness of the people for whom this structure has been raised,—points which will not escape the intelligent public of the future when inspecting it, but space forbids. The public of to-day will think as little of the Norman cathedral as they did of the elegant campanile, which turned out to be a commonsense combination of smoke-shaft and staircase, and I am convinced that the number of those who visit the old collection in its new home will be greater than it would have been had the architect confined himself to subordinated architecture and plain household detail.

Anchora.

EGYPTIAN PYRAMIDS.

Sir,—I have read with interest the translation of the report of Brugsch Pasha to the late Mariette Bey, regarding the recent opening of two of the Sakkárah pyramids, having visited these pyramids and the wonderful tombs of the sacred bulls,—the Serapeum,—and the beautifully-sculptured tomb of Tih and the temple adjoining, in November last. There are in all eleven pyramids at Sakkárah, the most important of which are known as "Aboussecr," "Sakkárah," and "Dashoór," the great necropolises of ancient Memphis. The Sakkárah is reckoned to be the oldest pyramid in Egypt, having been founded under the most ancient kings who succeeded to the throne of Menes, and flourished, so Mariette Bey informs us, "under the great pyramid-building fourth dynasty," and built by "Keku," who introduced the symbolic worship of "Apis," before 4449 B.C., and before Memphis was recognised as the capital of Egypt, although, possessing such burying-places as then existed, it must have been "no mean city." Tombs dating from this period were adorned with pictures. The sculpture of the tomb of Tih, which is still in perfection, although the painting has partially disappeared, prove a high state of civilisation.

The granite sarcophagi at Sakkárah, two of which are said to be royal tombs, are found in their places, but their precious contents have long since disappeared, and, like the one in the King's Chamber of the Great Pyramid, have been very roughly handled; the lid in the latter case being nowhere to be found.

It is interesting to compare Mariette Bey's opinion in respect to the age of the Egyptian pyramids with that of Professor Piazzi Smyth, the author of "Our Inheritance in the Great Pyramid." The Professor believes "the great Pyramid was the first reared of Egyptian monuments built immediately after the migration into Egypt from the Plains of Shinar by divine revelation for special objects"; and he assigns "the date of its erection to be 2170 B.C.," when the Pleiades were exactly pointed at by the entrance, and that the so-called sarcophagus is really a "coffer designed to perpetuate a standard measure of capacity for all time," and is exactly equal to four quarters of English measure, and to the *laver* of the Hebrews. Mariette Bey, however, asserts that the Pyramids are tombs and nothing more, and only exist in the cemeteries of the ancients. Herodotus attributes the Great Pyramid to Cheops, as his own kingly tomb; the second one to Cephrenes, his brother, who was architect for both, whose name is often found on ancient monuments, and whose statue I saw in the wonderful museum at Boulak.

If one may be permitted an opinion, I would say, with Mariette Bey, the pyramids were intended for royal tombs, standing conspicuously out amongst numerous others; but as to the date of their origin, I think the probabilities are with Professor Piazzi Smyth, and for this reason: The founding of Egypt is ascribed to Mizraim or Menes, the son of Ham. Ham was a son of Noah, and witnessed the Deluge, 2348 B.C. I know of nothing to controvert the probability that all the existing families of mankind are the descendants of Noah. The dispersion of the Babel confederacy took place 2247 B.C., just one hundred years afterwards. From the land or plain of Shinar, Mizraim migrated south, and founded Egypt. Out of that land also went forth Asshur (the son of Shem) and builded Nineveh; whilst Nimrod (also a descendent of Ham), "the mighty hunter before the Lord," founded the kingdom of Babylon. There is but little difficulty in assigning to Noah his rightful date in history.

H. H. Bridgman, A.R.I.B.A.

THE ENGLISH LAND SYSTEM AND THE CONDITION OF ENGLAND'S INDUSTRIES.

Sir,—The letter of "One from the Plough" (p. 457, *ante*) is an eloquent *exposé* of the feudalistic practices which, it is sad to say, are only too prevalent throughout the agricultural districts of England. The English agricultural labourer is still a serf, and the farmers are only a little removed from that condition. To pay the excessively-high rents to keep up the noble landlords' luxurious establishments prevents the farmer from adopting modern and scientific agricultural improvement, assuming he has the means. What advantage would the farmer derive from such improvements, when it is known that the rents would be increased in direct proportion to the advantages that might accrue from the improvements? The land laws of England are really little different from the brutal forest laws of William the Norman, and would disgrace a nation of barbarians, although it is a pleasure to add that one of the unjust clauses has lately been removed by the Ground Game Act.

Workmen of the northern mechanical and textile industries of England (which are the basis of England's greatness) are almost entirely fed from the produce of American farms, often cultivated by former English yeomen. This dependence on foreign produce cannot be satisfactory to Englishmen; as a nation, to be permanently prosperous, must have the means of existence permanently within itself. England will probably never recover the remarkable state of prosperity she enjoyed some ten years ago. Since then foreign competition has increased with immense strides. America has connected her free-farming districts by railways and lines of steamers with the ports of England, and she is erecting cotton-mills on her cotton fields and woollen and other mills so as to be independent of English manufactures. This self-supplying policy has already had a disastrous effect on the woollen trade of the West Riding of Yorkshire. France, also, with her remarkable system of peasant ownership (the real source of her wonderful elasticity and recuperation) is making rapid strides as an individual nation, and is no mean competitor for foreign markets. No other nation is so dependent on foreign food as England is. By and by we shall find out that if English manufacturers are to successfully compete with foreigners, the English workman must be fed to a great extent with English produce. At present America not only supplies us with raw cotton, but also with three out of every four loaves eaten by Englishmen, while thousands of English acres lie barren or stagnant, and hundreds of farmsteads are empty and desolate,—the once occupier, let us hope, happily settled in some freehold farm in the Far West, where feudalism and serfdom have no place, and where the fruits of labour belong to the labourer.

It is time that the true bearings of the land question on the future of England's manufacturing industries should be thoroughly understood. But for the glorious inventions of Watt, Stephenson, Arkwright, and others bringing with them a means of buying foreign produce, a revolution, produced by successive famines, would, probably, ere this, have swept away all vestiges and remnants of the feudalism of the Dark Ages, which are as darkness to the light of modern civilisation; but as foreign competition increases, the question of the cost of production of labour (which depends greatly on the cost of food) will compel the attention of Englishmen to the barbarities of the land system of England with its attendant degradations.

B. H. Thwaite.

Books.

An Introduction to the Study of Gothic Architecture. By John Henry Parker, C.B. Parker & Co., Oxford, and Southampton-street, Strand. 1881.

We have simply to mention that a new edition, the sixth, of this well-known and valuable little book, has been published. Already brimful of excellent illustrations, twelve new plates, chiefly in illustration of the Early English and the Decorated style, have been added to this edition. We cannot recommend it too strongly to all students.

VARIORUM.

"The Town, College, and Neighbourhood of Marlborough," by Edward Hulme, F.S.A. (London: Edward Stanford), must be rated amongst the best of the guide-books. It includes a number of very good illustrations, and is pleasant reading even for those who do not propose to visit the interesting neighbourhood it describes,—a neighbourhood full of ancient relics.——"Accented Four-figure Logarithms, arranged and accented by Lowis D'A. Jackson (W. H. Allen & Co.), 1881, will be found useful for those who desire exactitude in calculation. The class of common calculations, to which accented four-figure logarithms apply, are those of taking out square or cubic quantities, estimating cost, and conversion of quantities.——"Old Ireland Improved and made New Ireland," by John Doyle, C.E. (Ridgway), 1881, shows how the land has been neglected and mismanaged in Ireland during the last forty years, and deserves to be read in these difficult times by those who desire to see the Green Island peaceful and contented. Few persons would suppose that 80 *per cent.* of the whole of the Irish arable land were uncultivated, and under grass in 1879. Yet so it was.——A work entitled "Birchington-on-Sea and its Bungalows," by Athol Mayhew, with historical sketches and guide to Thanet, by S. W. Kershaw, M.A. (of Lambeth Palace Library), will shortly be published by Messrs. Batsford, 52, High Holborn. The book will be illustrated by lithographic drawings of the modern villas at Birchington, with examples of ancient domestic architecture in the Isle of Thanet.

DISSENTING CHURCH-BUILDING NEWS.

West Stockwith (*Notts*).—Mr. F. T. Mappin, M.P., on Good Friday, laid the foundation-stone of a new Primitive Methodist chapel in this village. The building will be in the Gothic style, the front being of brick, with Mansfield stone tracery. Mr. H. Kelsey, of Hepworth, is the contractor, and Mr. J. Wells, of Nottingham, the architect.

Lawton.—On Good Friday a new Primitive Methodist chapel was opened at Lane-head, Lowton, near Leigh, Lancashire. The building is of Romanesque style, the dimensions being 56ft. 6in. by 34 ft., and the height 24 ft. A gallery is erected at each end, and the interior work is of pitch-pine. The building is designed to seat 400, the cost being about 1,000*l.* Messrs. W. & H. Derbyshire, of Pendlebury, were the contractors.

Ripon.—On the 11th ult. a new school and manse for the Congregationalists were formally opened at Ripon. The foundation-stone was laid on the 8th of September last year by the Marchioness of Ripon. The total cost will be about 1,100*l.* The contractors for the various works were:—Builders and plasterers, Messrs. White, Harrogate; joiners and plumbers, Messrs. Chandler & Son, Tanfield; slating, Mr. John Baynes; painters, Messrs. Scott, Ripon; ironwork, the executors of Mr. R. James; heating apparatus, Mr. W. Wilkinson; school fittings, Mr. Staniland, Ripon. The architect is Mr. H. Brodrick, Ripon.

Miscellanea.

Society of Engineers.—At a meeting of the Society of Engineers, held on Monday evening, May 2nd, in the Society's Hall, Victoria-street, Westminster, Mr. Charles Horsley, President, in the chair, a paper was read by Mr. John Standfield on "Floating Docks, the Depositing Dock, and the Double Power Dock." The depositing dock is L shaped, that is, it has only one side. While it is being raised or lowered, it is kept horizontal by the outrigger, which is a broad shallow pontoon attached to the side of the dock and so ballasted that it always floats at about half its depth. The bottom of the dock consists of a series of parallel fingers or pontoons rigidly connected to the side of the dock, but quite free at the outer ends. The special feature of this dock is that it can deposit vessels on staging formed of parallel rows of piles capped by horizontal timbers. These rows are erected at right angles to the shore line. Vessels of any breadth can be raised and deposited. One dock can serve any number of vessels, as the number that can be accommodated is limited only by the length of staging provided. In 1876, Messrs. Clark & Standfield constructed a 6,000 ton depositing dock for the Russian Government, and they have recently contracted for one of these docks for Barrow.

Value of Property in Bolton.—Last week Messrs. Lomax, Sons, & Mills submitted for sale by auction, at the Swan Hotel, Bolton, a quantity of freehold and leasehold property. Two leasehold shops and houses, with cottage, Nos. 12, 14, and 16, King-street, producing a rental of 41*l.* 12s., ground-rent free, produced 505*l.*; a house, No. 8, King-street, rental 10*l.* 8s., sold for 98*l.*; three houses, Nos. 114, 116, and 118, Spring-gardens, rentals respectively 9*l.* 15s., 10*l.* 8s., and 13*l.*, produced 475*l.*; two houses, No. 20 and 22, Roundcroft-street, rental 23*l.* 8s., and ground-rent 6*l.*, sold for 250*l.*; twelve houses, Nos. 77 to 89, Sidney-street, and Nos. 1, 2, 3, 5, and 7, Coope-street, producing a rental of 100*l.* 19s. 4d., ground-rent 6*l.* 10s. 6d., produced 900*l.*; four messuages, Nos. 69 to 75, Sidney-street, rental 41*l.* 12s., ground-rent 4*l.* 1s. 2d., sold for 476*l.*; five houses, Nos. 79 to 87, Orlando-street, rental 83*l.*, ground-rent 14*l.* 8s. 6d., sold for 1,100*l*; four houses, Nos. 22, 24, and 26, Henry-street, and 140, Westbrook-street, rental 64*l.*, ground-rent 12*l.* 12s. 6d., sold for 800*l.*; four houses, Nos. 4 to 12, Henry-street, annual rental 96*l.*, subject to ground-rent of 13*l.* 5s., produced 1,380*l.*; four houses in Henry-street, Nos. 14 to 20, annual rental 72*l.* ground-rent 10*l.* 12s., sold for 1,020*l.* The Spring Gardens Mills were also offered for competition, but were withdrawn at 11,000*l.*

Art Workmanship Exhibition.—The Preparations for the Exhibition of Works of Art applied to Furniture, at the Royal Albert Hall, are now being proceeded with. The available space has been divided amongst the following firms, who will afford facilities to exhibitors of articles which may be considered as accessories of furniture, such articles to be shown in company with the specimens of art furniture exhibited:—Messrs. J. G. Crace & Son; Morant, Boyd, & Blanford; Jackson & Graham; Gillow & Co.; Holland & Sons; Howard & Sons; Wright & Mansfield; Collinson & Lock; Gregory & Co.; Shoolbred & Co.; and Johnston, Jeanes, & Co. The Exhibition will open on Thursday, May 12th, at the same time as the General Art Exhibition at the Albert Hall, and it is proposed to keep the Exhibition open until the end of July.

Bells.—On Easter Monday the new peal of eight bells for Bromborough Parish Church—tenor 24 cwt., in E—cast by Messrs. Taylor, of Loughborough, Leicestershire, was used for the first time by the members of St. Peter's and St. Nicholas's Societies of Change Ringers, who throughout the day rang upwards of 7,000 changes of grandsire and Stedman triples and Kent treble bob major.

The National Association of British and Irish Millers will hold an International Exhibition of Flour-Mill Machinery and Bread Making and Baking Machinery, in the Agricultural Hall, London, on the 10th, 11th, 12th, 13th, and 14th of May. It promises to be a remarkable exhibition.

The Conference of Architects will be opened on this Friday evening, the 6th inst., at No. 9, Conduit-street.

Standard Life Assurance Offices.—The Portland stone for this building was all supplied by Mr. Samuel Trickett.

Wright's Patent Brush.—The patentee in this case, who is an architect, claims to have produced a brush the hairs of which will not come out, and that is not liable to some other well-known objections to ordinary brushes. By his plan the knot of hair is made up quite separate from the handle, the bristles are firmly secured in a narrow brass or copper band, about ½ in. wide, and by an ingenious little machine they are bound together under great pressure with a metal core or centre, inserted in such a manner that it is impossible for the hairs ever to get loose. The handle has on the top of it a brass socket, made of thin pressed metal; into this the knot of hair is inserted, a ring is pushed up, and the brush is ready for use; it requires no bridling of string or soaking in water, which two operations alone cost a painter one hour's labour, or 7d. added to the expense of the brush. Time is needed to confirm our good opinion of the invention, but we are very much disposed to think that Wright's brush will supply a *desideratum*.

The Institution of Civil Engineers.—The fifty-third anniversary of the incorporation of this society is to be celebrated by a *conversazione*, to be given by Mr. Abernethy, president, and Mrs. Abernethy, at the South Kensington Museum, by permission of the Lords of the Committee of Council on Education, on Friday, the 3rd of June.

Scarborough.—The memorial stones of new Sunday-schools and class-room for the Primitive Methodist body, situate in Gladstone-road, have been laid. The schools, which are being built by Mr. Jaram, builder, and Mr. Petch, are of brick with stone facings.

The Presidency of the Institute.—We have received several letters on this subject, but think it is not necessary to print them. Members of the Institute, whom the matter mainly concerns, are already fully informed.

TENDERS

For the erection of Board school, caretaker's cottage, boundary-walls, latrines, &c., at Cann Hall-lane, Wanstead. Mr. J. T. Bressey, architect. Quantities supplied:—

E. Good	£7,709	0	0
J. Harper	7,293	0	0
D. R. Boyd	7,222	0	0
North, Bros.	7,199	0	0
S. S. Scott	6,870	0	0
F. & F. J. Wood	6,687	0	0
W. Shurmur	6,687	0	0
J. Tyerman	6,679	0	0
J. Chalcroft	6,672	0	0
E. C. Howell & Son	6,650	0	0
A. Smith	6,599	16	0
J. Garrud	6,483	0	0
J. Page	6,469	0	0
S. Sabey & Son	6,454	0	0
James Brown	6,400	0	0
J. Holland	6,258	0	0
Edey & Handley	6,021	3	10
D. C. Jones & Co.	5,980	0	0
M'Gentry	5,920	0	0
Charlwood, Bros.	5,897	0	0
J. O. Richardson	5,890	0	0
A. Kilby	5,849	0	0
W. Gregar	5,849	0	0
A. S. Judd	5,633	0	0

For the erection of a residence at Kingswear, Devon, for Mr. Nathaniel Baker. Mr. R. Medley Fulford, architect. Quantities by Mr. E. Crutchloe:—

Luscombe & Son, Exeter	£4,075	0	0
F. Matthews, Babbacombe	3,900	0	0
Stephens & Bastow, Bristol	3,864	0	0
L. C. Pillar, Dartmouth	3,840	0	0
Gibbard, Exeter	3,620	0	0
Ebdon, Exmouth	3,499	0	0
Oldrieve, Dartmouth	3,458	0	0
Fosden, Ashburton	3,480	0	0
Rowse, Torquay	3,210	0	0
Tappe, Bovery (accepted)	3,066	0	0

For erecting and completing steam laundry for the Governors of the Sussex County Hospital, Brighton. Messrs. Scott & Hyde, architects. Quantities by Mr. F. W. Hyde:—

Wright	£2,570	0	0
Patching & Son	2,540	0	0
Webber	2,472	0	0
Cheeseman & Co.	2,450	0	0
Newnham	2,437	0	0
Coleman	2,435	0	0
Lynn & Son	2,395	0	0
Marshall	2,350	0	0
Steyning	2,350	0	0
Griffiths	2,290	0	0
Lockyer	2,270	0	0
Longley, Worth	2,047	0	0

For rebuilding the Rose Public House, West-street, Bethnal Green, for Messrs. Smith, Garrett, & Co. Hammack & Lambert, architects:—

T. W. Smith & Son	£1,189	0	0
J. & H. Cocks	1,118	0	0
J. H. Johnson	993	0	0
W. R. Cubitt	895	0	0

For alterations to premises at Northumberland-street, Strand, for Mr. D. Irvine. Mr. W. C. Evans, architect:—

H. Mallett	£405	0	0
T. Gregory (accepted)	355	0	0

For the erection of a new story upon Crown Buildings, Queen Victoria-street, for Mr. G. Taylor. Mr. Alfred Burr, architect:—

Richardson, Bros.	£598	0	0
Horlock, of Forest Hill (accepted)	565	0	0

For the fitting up of the premises now known as Fairfield Coffee Tavern, Wandsworth, as a coffee tavern and club rooms for the United Kingdom Coffee Tavern Company, Limited. Mr. Alfred Burr, architect:—

Richardson, Bros.	£298	0	0
Thomas	293	10	0
W. H. Smith, Walham Green (accepted)	252	16	0

For building house, Sebert-road, Forest Gate, for Mr. E. Barber. Mr. Richards, architect:—

Stone	£433	0	0
Grey	417	0	0
Hawkings	385	0	0

For the erection of a dwelling-house, baker's shop, and oven, at Hemel Hempstead, Herts. Mr. W. T. Feldon, architect:—

Horn	£435	0	0
Monk	390	0	0
Sear, Hemel Hempstead (accepted)	300	0	0
Philbey	292	0	0

For new roads and sewer on the Cricket Field Estate, for Mr. E. R. Cook:—

Wilson	£809	0	0
M'Kenzie	725	0	0
Dunmore	663	0	0
Harris	590	0	0
Peill	577	0	0
Jackson (accepted)	514	0	0

For conservatory to Bosky Bank, Dulwich, for Mr. J. Henderson. Mr. R. Peters, architect:—

Watson & Dennett (accepted)	£150	0	0

For governor's residence, offices, and stores, Children's Home (Lancashire Branch), Edgeworth, near Bolton. Mr. T. Ormrod, architect:—

W. Peacock	£786	10	0
Martin Bros. (accepted)	665	0	0
Concrete Floors and Iron Joists (ground floor) finished partly in Cement.			
R. Swarbrick & Co.	£40	10	0
Homan & Rodgers (accepted)	38	14	6
R. L. Lowe	38	5	0

Note.—The Committee provide stone flags, lime, and sand for masonry.

For new exhibition gallery at the British Museum, for H.M. Office of Works:—
McLachlan & Sons (accepted).

For alterations, &c., to Holloway Branch of London and South-Western Bank. Mr. J. Truefitt, architect. No quantities:—

Ellis	£384	0	0
Smith	259	0	0
McLachlan & Sons	248	0	0

For rebuilding shops in Dalston-lane, for Mr. Jaye. Mr. S. Hayworth, architect:—
George Crabb (accepted).

For the completion of three mansions, South Kensington. Mr. A. R. Pite, architect. Quantities by Mr. Rookwood:—

Booth & Sons	£14,659	0	0
Higgs & Hill	13,584	0	0
Staines & Son	13,382	0	0
Hobson	12,964	0	0
Falkner	12,950	0	0
Cowland Bros.	12,848	0	0
Nightingale	12,582	0	0
Braid & Co.	12,250	0	0
Kirk & Randall	12,215	0	0
Tongue	11,996	0	0
Patman & Fotheringham	11,973	0	0

For new Board schools, Oban-street, Bromley. Mr. R. Robson, architect. Quantities by Mr. W. H. Barber:—

G. S. S. Williams & Son	£20,452	0	0
J. T. Chappell	20,156	0	0
J. Grover	19,863	0	0
Higgs & Hill	19,794	0	0
C. Cox	19,664	0	0
Hook & Oldrey	19,408	0	0
Harris & Wardrop	18,960	0	0
E. Laurance	18,844	0	0
Staines & Co.	18,775	0	0
Atherton & Latta	18,500	0	0
Kirk & Randall	18,454	0	0
S. J. Jerrard	18,244	0	0

For six shop fronts, Queen's-road, Peckham:—
Taylor & Parfitt (accepted).

For the erection of two houses, for Mr. Hollett, at Weybourne, near Farnham. Mr. T. Wonnacott, architect:—

Jenkins, Aldershot	£469	0	0
Seabright, Aldershot	427	0	0
Garland, Aldershot (accepted)	395	0	0

For works to Nos. 2 and 3, Fisher-street, Red Lion-square. Mr. C. H. Searle, architect:—

	Repairs.		
Broad & Son	£180	0	0
G. Brown	176	0	0
Scurrah (accepted)	155	9	0

For erecting a Wesleyan Methodist Chapel at Holly Park, Crouch Hill. Mr. E. Hoole, architect:—

	Contracts 1, 2, 3, 4.	Extra for Stone Facing.
Sharman	£15,100 !	—
Yardley & Sons	12,285	£388
Higgs	11,300	550
Burman	9,960	1,600
W. Smith	9,660	1,364
Crabb	7,764	584
Holloway	7,249	1,390
Lathey, Bros. (accepted)	7,033 !	313

For new warehouse, corner of New Basinghall-street and Fore-street, for Messrs. Hogg & Co. Mr. G. Somers Clark, architect. Quantities supplied by Mr. C. Maylard:—

Hayward, Bros.	£15,790	0	0
Stevens & Bastow, Bristol	14,999	0	0
Mantery	14,895	0	0
Holland & Hannen	14,768	0	0
Lucas, Bros.	14,463	0	0
W. Brass	13,973	0	0

For the erection of St. Philip's Church, Hull. Messrs. Botterill, Son, & Bilson, architects. Quantities by the architects:—

G. Jackson & Son, Hull	£4,468	16	9
Wilson, Bros., Hull	4,200	0	0
T. Goates, Hull	4,076	0	0
J. Jackson, York	4,035	0	0
J. Dawes, Hull	3,937	4	0
B. Musgrave, jun., Hull	3,926	0	0
R. Habbershaw & Son, Hull	3,918	12	0
W. Lison, Hull	3,890	0	0
J. Padbury & Son, Scarborough	3,888	17	0
R. Beevers, Hull	3,831	14	0
J. & C. Curtis, Hull	3,694	18	0
Hockney & Liggins, Hull	3,689	0	0
R. Sergeant (accepted), Hull	3,602	0	0
T. E. Giles, Hull	3,595	0	0

For business premises in High-street, Romford, Essex, for Mr. J. W. Lasham. Mr. R. Griggs, architect:—

Davey, Romford	£2,675	0	0
Holliday	2,575	0	0
Morter	2,500	0	0
Crockett	2,492	0	0
Hammond, Romford (accepted)	2,345	0	0
Larter & Son	2,331	0	0

For the removal of existing iron roofs, and erecting new, at the Foreign cattle Market, Deptford, for the Corporation of the City of London. Mr. H. Jones, architect:—

J. Butler	£12,820	0	0 !
Handyside	7,551	0	0
C. Horsley	7,350	0	0
Horton & Son	7,020	0	0
Rownson, Drew, & Co.	6,856	0	0
Young & Co.	5,991	0	0
Jukes & Co.	5,748	0	0
Whitford	5,522	0	0
Morewood	4,934	0	0
Clark, Bunnett, & Co., Limited (accepted)	4,853	17	1 !

For the erection of new warehouse, 108, Old Kent-road, for Messrs. J. Edgington & Sons. No quantities:—

Kirk & Randall	£2,135	0	0
Falkner	1,975	0	0
Battley	1,879	0	0
Canning & Mullens	1,815	0	0
Smith	1,700	0	0
W. & F. Croaker (accepted)	1,700	0	0

For a new shop-front and fittings, Bailgate, Lincoln:—

Martin & Sims (accepted)	£253	10	0

For rebuilding premises, 10, Bury-street, St. Mary-axe, for Mr. H. Montague. Mr. H. H. Collins, architect. Quantities supplied by Messrs. Batstone:—

		Lift.	Old Materials.
Haward, Bros.	£2,580	£145	£30
Knight	2,323	136	25
Abrahams	2,285	130	20
Jones	2,280	131	—
McLachlan	2,183	133	50
Robinson	2,122	149	60
Sabey & Son	2,085	130	—
W. & F. Croaker	2,065	128	30

For the construction of the Shortlands section of sewerage, Kent:—

H. Walker, Upper Holloway	£7,780	18	10
W. J. Botterill, Cannon-street, E.C.	6,245	19	4
J. Simmons, Sidcup	6,127	9	8
W. J. Woodham, Penge	6,074	1	9
Hill Bros., Beckenham	5,969	4	4
Nowell & Robson, Kensington	5,594	6	1
J. W. Neave, Lewisham	5,547	12	6
G. Rayner, Bootle, Liverpool	5,188	2	5
J. Dyer, Camberwell	5,038	17	7
Woodham, Catford	4,949	0	0
H. Potter, Clapton	4,779	18	2
H. Nicholson, Chelmsford	4,655	16	7
C. Killingback, Camden Town	4,620	15	2
W. Harris, Camberwell	4,603	12	2
J. Bingham, Headcorn	4,550	12	0
H. Brooker, Beckenham	4,328	9	4
G. Stevenson, Chesterfield	4,157	17	11
J. Dickson, Sevenoaks	4,138	7	0

Accepted for labour only in erecting a block of cottages Petersham, near Richmond, Surrey, for Mr. Robert White. Mr. W. G. Flint, architect:—

Excavating, Bricklaying, Slating, and Plastering.			
G. King, Romford	£240	0	0
Fixing Carpentry, &c., and Painting, &c.			
Denman & Hughes, Petersham	£200	0	0
Carpentry and Joinery.			
A. Stewart, Dundee	£450	0	0

For building new offices and hop sample rooms, King's Head Yard, Borough, for Mr. J. Gillespie. Messrs. Newman & Billing, architects. Quantities supplied by Messrs. J. S. Lee & Son:—

		Fittings in Show Room.	Strong Room.
Greenwood	£1,796	122	35
W. Downs	1,733	123	35
Macey	1,703	104	42
W. & F. Croaker	1,645	95	40

For alterations and repairs to five houses, Spicer-street, Spitalfields, for Mr. Ellerms. Mr. E. Brown, architect:—

Belcher & Ullmer	£530	0	0
Christopher	528	0	0
S. Salt	447	0	0
R. Marr	447	0	0
S. W. Hawkings	417	0	0
Uff (accepted)	398	0	0

For roads, sewers, and surface water-drains, for the Real Property Investment Association, Limited, on their Hervey Park Estate, Clay-street, Walthamstow. Mr. W. Crisp, surveyor:—

Acock, Cannon-street	£1,607	0	0
Woodham, Catford	1,540	0	0
Brooker, Beckenham	1,438	0	0
Jackson, Leyton	1,400	0	0
Blomfield, Tottenham	1,393	0	0
Harris, Camberwell	1,377	0	0
Wilson, Walthamstow (accepted)	1,093	0	0

For a pair of cottages, Maybury-road, Woking Station. Messrs. Peak, Lunn, & Peak, architects:—

A. A. Gale, Woking	£593	0	0
Jas. Clark, Esher	555	0	0
Jas. Wilson, Woking	545	0	0
Geo. Shears, Woking	520	0	0
Wm. J. Butt, Woking	415	0	0
Jas. Whitburn, Woking	396	0	0
Thos. Swayne, Guildford	390	0	0
S. Fowler, Woking (accepted)	373	10	0

For constructing new shops to four houses, Woking Station. Messrs. Peak, Lunn, & Peak, architects:—

		Tile Wall Lining.*		
G. Strudwick, Guildford	£780	£28	0	0
Garnett & Mills, Guildford	753	32	12	0
Martin, Wells & Co. Aldershot	644	—		
J. Whitburn, Woking	630	26	0	0
R. Pink, Milford	626	34	0	0
J. Harris, Woking (accepted)	550	16	6	0

* Extra for tile wall lining to butcher's shop.

For new dwelling-house and shop, Sloughton, near Guildford. Messrs. Peak, Lunn, & Peak, architects:—

				Less if no Oven built.
Mitchell, Bros., Shalford	£941	0	0	£41
Martin, Wells, & Co., Aldershot	850	0	0	20
Pearce & Clark, Guildford	777	7	0	—
Garnett & Mills, Guildford	775	0	0	—
R. Pink, Milford	798	0	0	40
J. Harris, Woking	698	10	0	—
G. Strudwick, Guildford (accepted)	698	10	0	26

For the erection of premises in Little Park-street, Westminster, for Mr. J. Gillespie. Mr. H. S. Legg, Christ's Hospital, architect. Quantities supplied by Mr. Griffiths:—

W. & F. Croaker (accepted)	£2,160	0	0

For building a house in Maria-street, Kingsland-road, for Mr. Holstein. Messrs. Massina, Roper, & Meade architects:—

Lusk	£313	0	0
Young	293	0	0
A. S. Judd	287	10	0

For constructing a new double shop-front at 162, High-street, Guildford. Messrs. Peak, Lunn, & Peak, architects:—

W. Thompson, London	£133	16	0
Pearce & Clark, Guildford	98	0	0
G. Strudwick, Guildford (accepted)	89	5	0
T. Swayne, Guildford	65	10	0

For Wesleyan Chapel, Willesden, Middlesex, for 1,000 persons, with spire. Mr. C. Bell, architect. Quantities by Mr. H. Lovegrove:—

Lucas & Son	£5,610	0	0
Johnson	5,454	0	0
Boden	5,370	0	0
White	5,340	0	0
Woodward	5,272	0	0
Tennant	5,117	0	0
Hickinbotham	5,100	0	0
Gregar	5,093	0	0
Belham	5,041	0	0
F. Higgs	5,030	0	0
Allen & Sons (accepted)	4,700	0	0

For new schools at Sydenham-road, Croydon, for the Croydon School Board, to accommodate 730 children, with caretaker's house, fences, playground, &c. Mr. C. Bell, architect. Quantities by Mr. H. Lovegrove:—

Ward	£6,759	0	0
Marriage	6,765	0	0
Bowyer	6,388	0	0
Legg	6,253	0	0
Taylor	6,184	0	0
G. Williams	6,110	0	0
Pearson & Myles	5,998	0	0
Woodward	5,926	0	0
J. Smith (accepted)	5,906	0	0
F. Higgs	5,652	0	0

For Wesleyan chapel and schools, Addiscombe-road. Mr. F. Boreham, architect:—

Higgs & Hill	£6,550	0	0
Goodman	6,445	0	0
Ward	6,061	0	0
Sargeant	5,748	0	0
Bowyer	5,744	0	0
Smith & Son	5,587	0	0
Belham & Co.	5,450	0	0
Morter	5 4 3	0	0
Steel, Bros.	5,390	0	0
Woodward	5,366	0	0
Marriage	5,250	0	0
Sawyer	5,231	0	0

For Wesleyan chapel and offices, Forest Gate. Mr. F. Boreham, architect:—

Goodman	£5,995	0	0
Dove, Bros.	5,570	0	0
North, Bros.	5,495	0	0
Nightingale	5,454	0	0
L. & R. Roberts	5,341	0	0
Hosking	5,047	0	0
Bangs & Co.	4,997	0	0
Reed	4,985	0	0
Hearle & Son	4,983	0	0
Sargeant	4,890	0	0
Morter	4,873	0	0
Sawyer	4,720	0	0
Gregar (accepted)	4,584	0	0

For new roads and surface water-drains, on the East Ham Estate, Essex, for Mr. W. Hitchman:—

Dunmore	£1,235	0	0
M'Kenzie	1,190	0	0
Wilson	1,020	0	0
Harris	958	0	0
Peill	710	0	0
Jackson (accepted)	666	0	0

For building the Hamilton Arms, Herne-hill, Surrey, for Messrs. Mann, Crossman, & Paulin. Mr. Ernest Shum, architect. Quantities by Mr. J. G. Rayner:—

Langmead & Way (accepted)	£1,190	0	0

For villa residence, Bury-road, Portsmouth, for Mr. J. D. Hill, exclusive of painting, paperhanging, stoves, and chimney-pieces. Mr. R. Peters, architect:—

J. Butt, Gosport (accepted)	£871	0	0

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